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<110> Lehmann-Bruinsma, Karin
Liaw, Chen W.
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aagcctgaga ggaatgtccg cagtgccttc accacctctg atgttgtccg catgcatgtt 2580
ggcgtatggc agctgcctcg ccgctccaac actttcctca acatcttccg aaga 2634

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<210> 347
 <211> 878
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Val Gly Leu Leu Leu Phe Phe Phe Pro Ala Ile Phe Leu Glu Val
 1 5 10 15
 Ser Leu Leu Pro Arg Ser Pro Gly Arg Lys Val Leu Leu Ala Gly Ala
 20 25 30

Ser	Ser	Gln	Arg	Ser	Val	Ala	Arg	Met	Asp	Gly	Asp	Val	Ile	Ile	Gly
		35					40					45			
Ala	Leu	Phe	Ser	Val	His	His	Gln	Pro	Pro	Ala	Glu	Lys	Val	Pro	Glu
	50					55					60				
Arg	Lys	Cys	Gly	Glu	Ile	Arg	Glu	Gln	Tyr	Gly	Ile	Gln	Arg	Val	Glu
65					70					75					80
Ala	Met	Phe	His	Thr	Leu	Asp	Lys	Ile	Asn	Ala	Asp	Pro	Val	Leu	Leu
				85					90					95	
Pro	Asn	Ile	Thr	Leu	Gly	Ser	Glu	Ile	Arg	Asp	Ser	Cys	Trp	His	Ser
			100					105					110		
Ser	Val	Ala	Leu	Glu	Gln	Ser	Ile	Glu	Phe	Ile	Arg	Asp	Ser	Leu	Ile
		115					120					125			
Ser	Ile	Arg	Asp	Glu	Lys	Asp	Gly	Ile	Asn	Arg	Cys	Leu	Pro	Asp	Gly
	130					135					140				
Gln	Ser	Leu	Pro	Pro	Gly	Arg	Thr	Lys	Lys	Pro	Ile	Ala	Gly	Val	Ile
145					150					155					160
Gly	Pro	Gly	Ser	Ser	Ser	Val	Ala	Ile	Gln	Val	Gln	Asn	Leu	Leu	Gln
				165					170					175	
Leu	Phe	Asp	Ile	Pro	Gln	Ile	Ala	Tyr	Ser	Ala	Thr	Ser	Ile	Asp	Leu
			180					185					190		
Ser	Asp	Lys	Thr	Leu	Tyr	Lys	Tyr	Phe	Leu	Arg	Val	Val	Pro	Ser	Asp
		195					200					205			
Thr	Leu	Gln	Ala	Arg	Ala	Met	Leu	Asp	Ile	Val	Lys	Arg	Tyr	Asn	Trp
	210					215					220				
Thr	Tyr	Val	Ser	Ala	Val	His	Thr	Glu	Gly	Asn	Tyr	Gly	Glu	Ser	Gly
225					230					235					240
Met	Asp	Ala	Phe	Lys	Glu	Leu	Ala	Ala	Gln	Glu	Gly	Leu	Cys	Ile	Ala
				245					250					255	
His	Ser	Asp	Lys	Ile	Tyr	Ser	Asn	Ala	Gly	Glu	Lys	Ser	Phe	Asp	Arg
			260					265					270		
Leu	Leu	Arg	Lys	Leu	Arg	Glu	Arg	Leu	Pro	Lys	Ala	Arg	Val	Val	Val
		275					280					285			
Cys	Phe	Cys	Glu	Gly	Met	Thr	Val	Arg	Gly	Leu	Leu	Ser	Ala	Met	Arg
	290					295					300				
Arg	Leu	Gly	Val	Val	Gly	Glu	Phe	Ser	Leu	Ile	Gly	Ser	Asp	Gly	Trp
305					310					315					320
Ala	Asp	Arg	Asp	Glu	Val	Ile	Glu	Gly	Tyr	Glu	Val	Glu	Ala	Asn	Gly
				325					330					335	

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<400> 348
agaggggtgaa acgcacagcc atcgccatct g
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31

<211> 31
 <212> DNA
 <213> Homo sapiens

<400> 349
 ctcccttcggt cctcctatcg ttgtcagaag t

31

<210> 350
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 350
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 cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
 atcatcatgc cttcgggtgt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
 gtcattcttg cggtcgtgaa gaagtccaag ctgcaactgg gcaacaacgt ccccgacatc 240
 ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccaactgtca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
 accctgggta tctgcctcct gtgggcccct tccttcatca gcatcacccc tgtgtggctg 540
 tatgccagac tcatcccctt cccaggagggt gcagtgggct gcggcatacg cctgcccac 600
 ccagacactg acctctactg gttcacccctg taccagtttt tccctggcctt tgccctgcct 660
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 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
 cgcttgggtc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaaagc aaaggcacct ga 1062

<210> 351
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 351
 Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1 5 10 15
 Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
 20 25 30
 Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
 100 105 110
 Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115 120 125
 Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
 130 135 140
 Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
 145 150 155 160
 Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
 165 170 175
 Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
 180 185 190
 Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
 195 200 205
 Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
 210 215 220
 Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
 225 230 235 240
 Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Lys Arg
 245 250 255
 Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
 260 265 270
 Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
 275 280 285
 Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
 290 295 300
 Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
 305 310 315 320
 Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
 325 330 335
 Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
 340 345 350

Thr

<210> 352
 <211> 31
 <212> DNA
 <213> Homo sapiens

<400> 352
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<210> 353
<211> 31
<212> DNA
<213> Homo sapiens

<400> 353
cagatggcga tggctctgcg tttcaccctc t 31

<210> 354
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 354
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cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtggt cggcaccatc tgctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccactgtcca ccccatctct tcacgaagt tccggaagcc ctctgtggcc 480
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tatgccagac tcatcccttt cccaggaggt gcagtgggct gcggcatacg cctgcccaac 600
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cccgctctcc agcgcagcat ccggctgcgg acaaagaggg tgaaacgcca ggccatcgcc 780
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cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaaagc aaaggcacct ga 1062

<210> 355
<211> 353
<212> PRT
<213> Homo sapiens

<400> 355
Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15
Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30
Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

000000-040501

Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile	
65					70					75					80	
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met	
				85					90					95		
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly	
			100					105					110			
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe	
		115					120					125				
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala	
	130					135					140					
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala	
145					150					155					160	
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr	
				165				170						175		
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val	
			180					185					190			
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe	
		195					200					205				
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile	
	210					215					220					
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala	
225					230					235					240	
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Lys	Arg	
				245					250					255		
Lys	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Trp	Ala	Pro	Tyr	
			260					265					270			
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr	
		275					280					285				
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser	
	290					295					300					
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys	
305					310					315					320	
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala	
				325					330					335		
Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly	
			340					345					350			
Thr																

<210> 356
 <211> 70
 <212> DNA
 <213> Homo sapiens

<400> 356
 gatcctgcag aaggtgaagt cctctggaat ccgagtgggc tcctctaaga ggaagaagtc 60
 tgagaagaag 70

<210> 357
 <211> 71
 <212> DNA
 <213> Homo sapiens

<400> 357
 gtgaccttct tctcagactt cttcctctta gaggagccca ctcggtattcc agaggacttc 60
 accttctgca g 71

<210> 358
 <211> 1349
 <212> DNA
 <213> Homo sapiens

<400> 358
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 cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
 atcatcatgc cttcgggtgt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
 gtcattctcg cggtcgtgaa gaagtccaag ctgcaactgg gcaacaacgt ccccgacatc 240
 ttcattcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
 acctgggtga tctgcctcct gtgggcccct tcttcatca gcatcaccac tgtgtggctg 540
 tatgccagac tcatcccttt cccaggaggt gcagtgggct gcggcatacg cctgccaac 600
 ccagacactg acctctactg gttcaccctg taccagtttt tccctggcctt tgccctgcct 660
 tttgtggtca tcacagccgc atactgtagg atcctgcaga aggtgaagtc ctctggaatc 720
 cgagtgggct cctctaagag gaagaagtct gagaagaagg tcaccgcac agccatcgcc 780
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 tccatcagcc gcccgaccct cactttgtc tacttataca atgcggccat cagcttgggc 900
 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaa 960
 cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaagc aaaggcacct gatacttccc ctgccaccct 1080
 gcacacctcc aagtcagggc accacaacac gccaccggga gagatgctga gaaaaacca 1140
 agaccgctcg ggaaatgcag gaaggccggg ttgtgagggg ttgttgcaat gaaataaata 1200
 cattccatgg gctcacacgt tgctggggag gcctggagtc aggtttgggg ttttcagata 1260
 tcagaaatcc cttgggggag caggatgaga cctttggata gaacagaagc tgagcaagag 1320
 aacatgttgg tttggataac cggttgcac 1349

<210> 359
 <211> 446
 <212> PRT
 <213> Homo sapiens

5' - 3' 60592860

SECRET

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Lys Val Lys Ser Ser Gly Ile
225 230 235 240

Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr Arg
245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser

290

295

300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr Tyr Phe Pro Cys His Pro Ala His Leu Gln Val Arg Ala Pro Gln
355 360 365

His Ala Thr Gly Arg Asp Ala Glu Lys Asn Pro Arg Pro Leu Gly Lys
370 375 380

Cys Arg Lys Ala Gly Leu Gly Val Val Ala Met Lys Ile His Ser Met
385 390 395 400

Gly Ser His Val Ala Gly Glu Ala Trp Ser Gln Val Trp Gly Phe Gln
405 410 415

Ile Ser Glu Ile Pro Trp Gly Ser Arg Met Arg Pro Leu Asp Arg Thr
420 425 430

Glu Ala Glu Gln Glu Asn Met Leu Val Trp Ile Thr Gly Cys
435 440 445

<210> 360

<211> 33

<212> DNA

<213> Homo sapiens

<400> 360

ggctatgccacacagctacctcaaccctttgtg

33

<210> 361

<211> 33

<212> DNA

<213> Homo sapiens

<400> 361

cacaaaggggttgaggtagctgttggcatagcc

33

<210> 362

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 362

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atcatcatgc cttcgggtgtt cggcaccatc tgccctctgg gcatcatcgg gaactccacg 180

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gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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ccagacactg acctctactg gttcacccctg taccagtttt tcctggcctt tgccctgcct 660
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<210> 363
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 363

Met	Asp	Leu	Glu	Ala	Ser	Leu	Leu	Pro	Thr	Gly	Pro	Asn	Ala	Ser	Asn	1	5	10	15
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Thr	Gly	Ser	Ile	Ser	Tyr	Ile	Asn	Ile	Ile	Met	Pro	Ser	Val	Phe	Gly	35	40	45	
Thr	Ile	Cys	Leu	Leu	Gly	Ile	Ile	Gly	Asn	Ser	Thr	Val	Ile	Phe	Ala	50	55	60	
Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile	65	70	75	80
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met	85	90	95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly	100	105	110	
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe	115	120	125	
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala	130	135	140	
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala	145	150	155	160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr	165	170	175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val				

<213> Homo sapiens

<400> 366

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cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcgggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgata 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
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accctggatg tctgcctcct gtgggcccctc tcttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcaccctg taccagtttt tccctggcctt tgccctgcct 660
tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcagtggcc 720
cccgcctccc agcgcagcat ccggctgagg acaaagaggg tgaccgcgac agccatcgcc 780
atctgtctgg tcttctttgt gtgctgggca ctctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgaccct cacctttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttgggtc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062
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<210> 367

<211> 353

<212> PRT

<213> Homo sapiens

<400> 367

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 1                5                10                15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
      20                25                30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35                40                45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50                55                60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65                70                75                80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
      85                90                95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
 100                105                110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115                120                125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
 130                135                140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
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145		150		155		160
Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr						
	165			170		175
Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val						
	180			185		190
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe						
	195			200		205
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile						
	210			215		220
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala						
	225			230		235
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg						
	245			250		255
Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Leu Tyr						
	260			265		270
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr						
	275			280		285
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser						
	290			295		300
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys						
	305			310		315
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala						
	325			330		335
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly						
	340			345		350
Thr						

<210> 368
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 368
 ggtcttcttt gtgtgctgcg caccctacta tgtg

34

<210> 369
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 369

cacatagtag ggtgcgcgagc acacaaagaa gacc

34

<210> 370
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 370
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cccgataacc tcaacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtggt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcaactgg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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tatgccagac tcatccctct cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcacctct taccagtttt tccctggcctt tgccctgctc 660
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cccgcctccc agcgcagcat ccggtgcgg acaaagagg tgacccgcac agccatcgcc 780
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cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 371
<211> 353
<212> PRT
<213> Homo sapiens

<400> 371
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Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
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Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60
Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80
Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95
Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110
Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe

115					120					125									
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala				
130					135					140									
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala				
145					150					155					160				
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr				
165					170					175									
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val				
180					185					190									
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe				
195					200					205									
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile				
210					215					220									
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala				
225					230					235					240				
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg				
245					250					255									
Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Cys	Ala	Pro	Tyr				
260					265					270									
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr				
275					280					285									
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser				
290					295					300									
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys				
305					310					315					320				
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala				
325					330					335									
Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly				
340					345					350									
Thr																			

<210> 372
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 372
 ggtcttcttt gtgtgcttcg caccctacta tgtg

<210> 373
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 373
 cacatagtag ggtgcgaagc acacaaagaa gacc

34

<210> 374
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 374
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 atcatcatgc cttcggtgtt cggcaccatc tgccctcctg gcatcatcgg gaactccacg 180
 gtcattcttc cggtcgtgaa gaagtccaag ctgcactggt gcaacaacgt ccccgacatc 240
 ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
 accctggtga tctgcctcct gtggggccctc tccttcatca gcatcacccc tgtgtggctg 540
 tatgccagac tcatccctt cccaggaggt gcagtgggct gcggcatacg cctgcccaac 600
 ccagacactg acctctactg gttcaccttg taccagtttt tcctggcctt tgccctgcct 660
 tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcatgtggc 720
 cccgcctccc agcgcagcat ccggctgcgg acaaagaggg tgaccgcgac agccatcgcc 780
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 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaa 960
 cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 375
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 375
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 Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met

85

90

95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Phe Ala Pro Tyr
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr

<210> 376

<11> 34

DNA

<213> Homo sapiens

<400> 376

ggctcttcttt gtgtgcttgg caccctacta tgtg

34

<210> 377

<211> 34

<212> DNA

<213> Homo sapiens

<400> 377

cacatagtag ggtgccaagc acacaaagaa gacc

34

<210> 378

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 378

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cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcgggtgtt cggcaccatc tgctcctgg gcacatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactgg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgcat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
accctggtga tctgcctcct gtggggccctc tccttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcaccctg taccagttt tcctggcctt tgccctgcct 660
tttgtggtca tcacagccgc atactgtagg atcctgcagc gcatgacgtc ctcatgtggc 720
ccgcctccc agcgcagcat ccggctgcgg acaaagaggg tgaccgcac agccatcgcc 780
atctgtctgg tcttctttgt gtgcttggca cctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgacct cacccttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa ccccttgggtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttgggtc tgtcgggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 379

<211> 353

<212> PRT

<213> Homo sapiens

<400> 379

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
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Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala

09336509-040501
T05040-6053260

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Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile
65					70					75					80
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met
			85						90					95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly
			100					105					110		
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe
		115					120					125			
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala
	130					135					140				
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala
145					150					155					160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr
			165						170					175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val
			180					185					190		
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe
		195					200					205			
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile
	210					215					220				
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala
225					230					235					240
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg
			245						250					255	
Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Leu	Ala	Pro	Tyr
			260					265					270		
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr
		275					280					285			
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser
	290					295					300				
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys
305					310					315					320
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala
			325						330					335	
Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly
			340					345					350		

Thr

0926509-040504

<210> 380
<211> 31
<212> DNA
<213> Homo sapiens

<400> 380
gccatctgtc tggatcatctt tgtgtgctgg g 31

<210> 381
<211> 31
<212> DNA
<213> Homo sapiens

<400> 381
cccagcacac aaagatgacc agacagatgg c 31

<210> 382
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 382
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atcatcatgc cttcggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
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gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 383
<211> 353
<212> PRT
<213> Homo sapiens

<400> 383
Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
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Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg

325

330

335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
 340 345 350

Thr

<210> 384
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 384
 cgcacagcca tcgcccagtg tctggtcttc tttgtg 36

<210> 385
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 385
 cacaaagaag accagacact gggcgatggc tgtgcg 36

<210> 386
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 386
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 gtcattcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
 ttcattcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgatc 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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 cccgcctccc agcgcagcat ccggtgagg acaaagaggg tgaccgcac agccatcgcc 780
 cagtgtctgg tcttctttgt gtgctgggca ccctactatg tgctacagct gaccagttg 840
 tccatcagcc gcccgaccct cacctttgtc taattataca atgcggccat cagcttgggc 900
 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaa 960
 cgcttgggtc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaaagc aaaggcacct ga 1062

<210> 387
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 387

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
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Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30
Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60
Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80
Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95
Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110
Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125
Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140
Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160
Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175
Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
245 250 255
Thr Ala Ile Ala Gln Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
260 265 270
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser

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290

295

300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr

<210> 388

<211> 33

<212> DNA

<213> Homo sapiens

<400> 388

accgcatgg ccattaacgc gtacctggcc act

33

<210> 389

<211> 33

<212> DNA

<213> Homo sapiens

<400> 389

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33

<210> 390

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 390

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atcatcatgc cttcggtgtt cggcaccatc tgccctctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
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cgctacctgg ccactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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tatgccagac tcatccccct cccaggagggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcacccctg taccagtttt tccctggcctt tgccctgect 660
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cccgcctccc agcgcagcat ccggctgcgg acaaagaggg tgaccgcac agccatcgcc 780
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tccatcagcc gccgcaccct cacctttgtc tacttataca atgcggccat cagcttgggc 900
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<210> 391
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 391

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 20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
 100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asn Arg Tyr Leu Ala
 130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
 145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
 165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
 180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
 195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
 210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
 225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
 245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr

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260

265

270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
 275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
 290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
 305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
 325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
 340 345 350

Thr

<210> 392
 <211> 32
 <212> DNA
 <213> Homo sapiens

<400> 392
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<210> 393
 <211> 32
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 <213> Homo sapiens

<400> 393
 gaccgtcagc gtatatgccg ataactcgct tg 32

<210> 394
 <211> 2292
 <212> DNA
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 tgcaaggata ttcaacgcat cccagctta ccgccagta cgcagactct gaagcttatt 180
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 aagctggatg ctgtttacct aaacaagaat aaatacctga cagttattga caaagatgca 660
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00926509 040501

115					120					125					
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130					135					140					
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145					150					155					160
Asn	Pro	Tyr	Met	Thr	Ser	Ile	Pro	Val	Asn	Ala	Phe	Gln	Gly	Leu	Cys
				165					170					175	
Asn	Glu	Thr	Leu	Thr	Leu	Lys	Leu	Tyr	Asn	Asn	Gly	Phe	Thr	Ser	Val
			180					185					190		
Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn
		195					200					205			
Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val
	210					215					220				
Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala
225					230					235					240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn
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Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu
			260					265					270		
Thr	Arg	Ala	Asp	Leu	Ser	Tyr	Pro	Ser	His	Cys	Cys	Ala	Phe	Lys	Asn
		275					280					285			
Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser
	290					295					300				
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser
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Pro	Leu	His	Gln	Glu	Tyr	Glu	Glu	Asn	Leu	Gly	Asp	Ser	Ile	Val	Gly
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Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr
			340					345					350		
Tyr	Val	Phe	Phe	Glu	Glu	Gln	Glu	Asp	Glu	Ile	Ile	Gly	Phe	Gly	Gln
		355						360				365			
Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His
	370					375					380				
Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro
385					390					395					400
Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe
				405					410					415	
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn

			420					425					430				
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val		
		435				440					445						
Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly		
		450				455					460						
Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu		
465					470					475							
Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr		
				485			490										
Ala	Gly	Phe	Phe	Thr	Val	Phe	Ala	Ser	Glu	Leu	Ser	Ala	Tyr	Thr	Leu		
		500				505											
Thr	Val	Ile	Thr	Leu	Glu	Arg	Trp	Tyr	Ala	Ile	Thr	Phe	Ala	Met	Arg		
		515				520											
Leu	Asp	Arg	Lys	Ile	Arg	Leu	Arg	His	Ala	Cys	Ala	Ile	Met	Val	Gly		
		530				535		540									
Gly	Trp	Val	Cys	Cys	Phe	Leu	Leu	Ala	Leu	Leu	Pro	Leu	Val	Gly	Ile		
545					550					555							
Ser	Ser	Tyr	Ala	Lys	Val	Ser	Ile	Cys	Leu	Pro	Met	Asp	Thr	Glu	Thr		
				565			570		575								
Pro	Leu	Ala	Leu	Ala	Tyr	Ile	Val	Phe	Val	Leu	Thr	Leu	Asn	Ile	Val		
		580				585											
Ala	Phe	Val	Ile	Val	Cys	Cys	Cys	Tyr	Val	Lys	Ile	Tyr	Ile	Thr	Val		
		595				600		605									
Arg	Asn	Pro	Gln	Tyr	Asn	Pro	Gly	Asp	Lys	Asp	Thr	Lys	Ile	Ala	Lys		
		610				615		620									
Arg	Met	Ala	Val	Leu	Ile	Phe	Thr	Asp	Phe	Ile	Cys	Met	Ala	Pro	Ile		
625					630					635							
Ser	Phe	Tyr	Ala	Leu	Ser	Ala	Ile	Leu	Asn	Lys	Pro	Leu	Ile	Thr	Val		
		645				650		655									
Ser	Asn	Ser	Lys	Ile	Leu	Leu	Val	Leu	Phe	Tyr	Pro	Leu	Asn	Ser	Cys		
		660				665		670									
Ala	Asn	Pro	Phe	Leu	Tyr	Ala	Ile	Phe	Thr	Lys	Ala	Phe	Gln	Arg	Asp		
		675				680		685									
Val	Phe	Ile	Leu	Leu	Ser	Lys	Phe	Gly	Ile	Cys	Lys	Arg	Gln	Ala	Gln		
		690				695				700							
Ala	Tyr	Arg	Gly	Gln	Arg	Val	Pro	Pro	Lys	Asn	Ser	Thr	Asp	Ile	Gln		
705					710					715							
Val	Gln	Lys	Val	Thr	His	Glu	Met	Arg	Gln	Gly	Leu	His	Asn	Met	Glu		

725

730

735

Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln
 740 745 750

Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu
 755 760

<210> 396

<211> 31

<212> DNA

<213> Homo sapiens

<400> 396

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<210> 397

<211> 31

<212> DNA

<213> Homo sapiens

<400> 397

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31

<210> 398

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 398

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 tgcaaggata ttcaacgcat cccagctta ccgcccagta cgcagactct gaagcttatt 180
 gagactcacc tgagaactat tccaagtcac gcattttcta atctgcccac tatttccaga 240
 atctacgtat ctatagatgt gactctgcag cagctggaat cacactcctt ctacaatttg 300
 agtaaagtga ctcacataga aattcggaat accaggaact taacttacat agaccctgat 360
 gccctcaaag agctccccct cctaaagtgc cttggcattt tcaacactgg acttaaaatg 420
 ttccctgacc tgaccaaagt ttattccact gatataattt ttataactga aattacagac 480
 aacccttaca tgacgtcaat ccctgtgaat gcttttcagg gactatgcaa tgaaaccttg 540
 aactgaagc tgtacaacaa cggctttact tcagtccaag gatattgctt caatgggaca 600
 aagctggatg ctgtttacct aaacaagaat aaatacctga cagttattga caaagatgca 660
 tttggaggag tatacagtgg accaagcttg ctggacgtgt ctcaaaccag tgtcactgcc 720
 cttccatcca aaggcctgga gcacctgaag gaactgatag caagaaacac ctggactctt 780
 aagaaacttc cacttttcctt gagtttcctt cacctcacac gggctgacct ttcttacc 840
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88

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Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val	
		210				215					220					
Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala	
		225				230				235						240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn	
				245					250							255
Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu	
			260					265								270
Thr	Arg	Ala	Asp	Leu	Ser	Tyr	Pro	Ser	His	Cys	Cys	Ala	Phe	Lys	Asn	
			275				280					285				
Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser	
		290				295					300					
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser	
		305				310				315						320
Pro	Leu	His	Gln	Glu	Tyr	Glu	Glu	Asn	Leu	Gly	Asp	Ser	Ile	Val	Gly	
				325					330							335
Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr	
			340					345								350
Tyr	Val	Phe	Phe	Glu	Glu	Gln	Glu	Asp	Glu	Ile	Ile	Gly	Phe	Gly	Gln	
			355					360								365
Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His	
						375					380					
Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro	
		385				390				395						400
Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe	
				405					410							415
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn	
			420					425								430
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val	
			435					440								445
Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly	
						455					460					
Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu	
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90

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32

<210> 401

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<213> Homo sapiens

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<211> 2292

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<400> 402

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tgcaaggata ttcaacgcat cccagctta cgcgccagta cgcagactct gaagcttatt 180
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105040-50592860

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 <212> PRT
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<400> 415
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 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
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 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
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 Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu

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Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn
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Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val
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Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala
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Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn
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Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu
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Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu																	
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	675	680															685
Val Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln																	
	690	695															700
Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln																	
	705	710															720
Val Gln Lys Val Thr His Glu Met Arg Gln Gly Leu His Asn Met Glu																	
	725	730															735
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745

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<400> 419

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Phe	Tyr	Asn	Leu	Ser	Lys	Val	Thr	His	Ile	Glu	Ile	Arg	Asn	Thr	Arg
			100					105					110		
Asn	Leu	Thr	Tyr	Ile	Asp	Pro	Asp	Ala	Leu	Lys	Glu	Leu	Pro	Leu	Leu
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Thr	Lys	Val	Tyr	Ser	Thr	Asp	Ile	Phe	Phe	Ile	Leu	Glu	Ile	Thr	Asp
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Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu
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Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser
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Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val
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Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly
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Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu
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Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr
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Ser	Ser	Tyr	Ala	Lys	Val	Ser	Ile	Cys	Leu	Pro	Met	Asp	Thr	Glu	Thr	
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Ala	Phe	Val	Ile	Val	Cys	Cys	Cys	Tyr	Val	Lys	Ile	Tyr	Ile	Thr	Val	
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Arg	Asn	Pro	Gln	Tyr	Asn	Pro	Gly	Asp	Lys	Asp	Thr	Lys	Ile	Ala	Lys	
610					615					620						
Arg	Met	Ala	Val	Leu	Ile	Phe	Thr	Asp	Phe	Ile	Cys	Met	Ala	Pro	Ile	
625					630					635					640	
Ser	Phe	Tyr	Ala	Leu	Ser	Ala	Ile	Leu	Asn	Lys	Pro	Leu	Ile	Thr	Val	
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Ser	Asn	Ser	Lys	Ile	Leu	Leu	Val	Leu	Phe	Tyr	Pro	Leu	Asn	Ser	Tyr	
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Ala	Asn	Pro	Phe	Leu	Tyr	Ala	Ile	Phe	Thr	Lys	Ala	Phe	Gln	Arg	Asp	
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Val	Phe	Ile	Leu	Leu	Ser	Lys	Phe	Gly	Ile	Cys	Lys	Arg	Gln	Ala	Gln	
690					695					700						
Ala	Tyr	Arg	Gly	Gln	Arg	Val	Pro	Pro	Lys	Asn	Ser	Thr	Asp	Ile	Gln	
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Val	Gln	Lys	Val	Thr	His	Glu	Met	Arg	Gln	Gly	Leu	His	Asn	Met	Glu	
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Asp	Val	Tyr	Glu	Leu	Ile	Glu	Lys	Ser	His	Leu	Thr	Pro	Lys	Lys	Gln	
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<400> 423

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 35 40 45

Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60

Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80

Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95

Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110

Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125

Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140

Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160

Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
 165 170 175

Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
 180 185 190

Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn
 195 200 205

Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val
 210 215 220

Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala
 225 230 235 240

Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn
 245 250 255

Thr Trp Thr Leu Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu

605040-6050250

565

570

575

Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val
580 585 590

Ala Phe Val Ile Val Cys Cys Cys Tyr Val Lys Ile Tyr Ile Thr Val
595 600 605

Arg Asn Pro Gln Tyr Asn Pro Gly Asp Lys Asp Thr Lys Ile Lys Lys
610 615 620

Arg Met Ala Val Leu Ile Phe Thr Asp Phe Ile Cys Met Ala Pro Ile
625 630 635 640

Ser Phe Tyr Ala Leu Ser Ala Ile Leu Asn Lys Pro Leu Ile Thr Val
645 650 655

Ser Asn Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Leu Asn Ser Tyr
660 665 670

Ala Asn Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp
675 680 685

Val Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln
690 695 700

Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln
705 710 715 720

Val Gln Lys Val Thr His Glu Met Arg Gln Gly Leu His Asn Met Glu
725 730 735

Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln
740 745 750

Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu
755 760

<210> 424
<211> 1266
<212> DNA
<213> Homo sapiens

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ctgctgctgg gcacgctcat cttctgcgcg gtgctgggca atgcgtgcgt ggtggctgcc 180
atcgctttgg agcgctccct gcagaacgtg gcccaattatc ttattggctc tttggcggtc 240
accgacctca tgggtgtcggg gttggtgctg cccatggccg cgctgtatca ggtgctcaac 300
aagtggacac tgggccagggt aacctgcgac ctgttcatcg ccctcgacgt gctgtgctgc 360
acctcatcca tcttgacact gtgcgccatc gcgctggaca ggtactgggc catcacggac 420
cccatcgact acgtgaacaa gaggacgccc cggccgcgtg cgctcatctc gctcacttgg 480
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tcggaccocg acgcatgcac cattagcaag gatcatggct acactatcta ttccaccttt 600
ggagctttct acatcccgct gctgctcatg ctggttctct atgggcgcac attccgagct 660
gcgcgcttcc gcatccgcaa gacggtcaaa aaggtggaga agaccggagc ggacaccgcg 720

[illegible]

114

Leu Met Leu Val Leu Tyr Gly Arg Ile Phe Arg Ala Ala Arg Phe Arg
 210 215 220

Ile Arg Lys Thr Val Lys Lys Val Glu Lys Thr Gly Ala Asp Thr Arg
 225 230 235 240

His Gly Ala Ser Pro Ala Pro Gln Pro Lys Lys Ser Val Asn Gly Glu
 245 250 255

Ser Gly Ser Arg Asn Trp Arg Leu Gly Val Glu Ser Lys Ala Gly Gly
 260 265 270

Ala Leu Cys Ala Asn Gly Ala Val Arg Gln Gly Asp Asp Gly Ala Ala
 275 280 285

Leu Glu Val Ile Glu Val His Arg Val Gly Asn Ser Lys Glu His Leu
 290 295 300

Pro Leu Pro Ser Glu Ala Gly Pro Thr Pro Cys Ala Pro Ala Ser Phe
 305 310 315 320

Glu Arg Lys Asn Glu Arg Asn Ala Glu Ala Lys Arg Lys Met Ala Leu
 325 330 335

Ala Arg Glu Arg Lys Thr Lys Lys Thr Leu Gly Ile Ile Met Gly Thr
 340 345 350

Phe Ile Leu Cys Trp Leu Pro Phe Phe Ile Val Ala Leu Val Leu Pro
 355 360 365

Phe Cys Glu Ser Ser Cys His Met Pro Thr Leu Leu Gly Ala Ile Ile
 370 375 380

Asn Trp Leu Gly Tyr Ser Asn Ser Leu Leu Asn Pro Val Ile Tyr Ala
 385 390 395 400

Tyr Phe Asn Lys Asp Phe Gln Asn Ala Phe Lys Lys Ile Ile Lys Cys
 405 410 415

Asn Phe Cys Arg Gln
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<210> 426
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 426
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 caggactcca tctccctacc ctggaaagta ctgctgggta tgctattggc gctcatcacc 180
 ttggccacca cgctctccaa tgcctttgtg attgccacag tgtaccggac ccggaactg 240
 cacaccccg ctaactacct gatcgctct ctggcagtca ccgacctgct tgtgtccatc 300
 ctggtgatgc ccatcagcac catgtacact gtcaccggcc gctggacact gggccagggtg 360
 gtctgtgact tctggctgtc gtgggacatc acttggttga ctgcctccat cctgcacctc 420
 tgtgtcatcg ccctggaccg ctactgggcc atcacggacg ccgtggagta ctcagctaaa 480

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aggactccca agagggcggc ggtcatgac gcgctggtgt gggctcttct catctctatc 540
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cataaactga tacgttttaa gtgcacaagt tga 1173

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<210> 427
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 427

Met Glu Glu Pro Gly Ala Gln Cys Ala Pro Pro Pro Pro Ala Gly Ser
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Glu Thr Trp Val Pro Gln Ala Asn Leu Ser Ser Ala Pro Ser Gln Asn
 20 25 30

Cys Ser Ala Lys Asp Tyr Ile Tyr Gln Asp Ser Ile Ser Leu Pro Trp
 35 40 45

Lys Val Leu Leu Val Met Leu Leu Ala Leu Ile Thr Leu Ala Thr Thr
 50 55 60

Leu Ser Asn Ala Phe Val Ile Ala Thr Val Tyr Arg Thr Arg Lys Leu
 65 70 75 80

His Thr Pro Ala Asn Tyr Leu Ile Ala Ser Leu Ala Val Thr Asp Leu
 85 90 95

Leu Val Ser Ile Leu Val Met Pro Ile Ser Thr Met Tyr Thr Val Thr
 100 105 110

Gly Arg Trp Thr Leu Gly Gln Val Val Cys Asp Phe Trp Leu Ser Ser
 115 120 125

Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His Leu Cys Val Ile Ala
 130 135 140

Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Val Glu Tyr Ser Ala Lys
 145 150 155 160

Arg Thr Pro Lys Arg Ala Ala Val Met Ile Ala Leu Val Trp Val Phe
 165 170 175

Ser Ile Ser Ile Ser Leu Pro Pro Phe Phe Trp Arg Gln Ala Lys Ala
 180 185 190

Glu Glu Glu Val Ser Glu Cys Val Val Asn Thr Asp His Ile Leu Tyr

195	200	205
Thr Val Tyr Ser Thr Val Gly Ala Phe Tyr Phe Pro Thr Leu Leu Leu		
210	215	220
Ile Ala Leu Tyr Gly Arg Ile Tyr Val Glu Ala Arg Ser Arg Ile Leu		
225	230	235
Lys Gln Thr Pro Asn Arg Thr Gly Lys Arg Leu Thr Arg Ala Gln Leu		
	245	250
Ile Thr Asp Ser Pro Gly Ser Thr Ser Ser Val Thr Ser Ile Asn Ser		
	260	265
Arg Val Pro Asp Val Pro Ser Glu Ser Gly Ser Pro Val Tyr Val Asn		
	275	280
Gln Val Lys Val Arg Val Ser Asp Ala Leu Leu Glu Lys Lys Lys Leu		
	290	295
Met Ala Ala Arg Glu Arg Lys Ala Lys Lys Thr Leu Gly Ile Ile Leu		
305	310	315
Gly Ala Phe Ile Val Cys Trp Leu Pro Phe Phe Ile Ile Ser Leu Val		
	325	330
Met Pro Ile Cys Lys Asp Ala Cys Trp Phe His Leu Ala Ile Phe Asp		
	340	345
Phe Phe Thr Trp Leu Gly Tyr Leu Asn Ser Leu Ile Asn Pro Ile Ile		
	355	360
Tyr Thr Met Ser Asn Glu Asp Phe Lys Gln Ala Phe His Lys Leu Ile		
	370	375
Arg Phe Lys Cys Thr Ser		
385	390	

<210> 428
 <211> 1134
 <212> DNA
 <213> Homo sapiens

<400> 428
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 cttgccgtgg tcctttccgt catcacactg gccacagtcc tctccaatgc ctttgtactc 180
 accaccatct tactcaccag gaagctccac acccctgcc actacctgat tggctccctg 240
 gccaccaccg acctcttggg ttccatcttg gtaatgccca tcagcatcgc ctataccatc 300
 acccacacct ggaactttgg ccaaactctg tgtgacatct ggctgtcctc tgacatcacg 360
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 taccgggctg cccggaaccg catcctgaat ccaccctcac tctatgggaa gcgcttcacc 720

acggcccacc tcatacacagg ctctgcgggg tctctgctct gctcgtcaa ctccagcctc 780
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gaagagtttc ggcaagcttt tcagaaaatt gtccctttcc ggaaggcctc ctacg 1134

<210> 429
<211> 377
<212> PRT
<213> Homo sapiens

<400> 429

Met Ser Pro Leu Asn Gln Ser Ala Glu Gly Leu Pro Gln Glu Ala Ser
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Asn Arg Ser Leu Asn Ala Thr Glu Thr Ser Glu Ala Trp Asp Pro Arg
20 25 30

Thr Leu Gln Ala Leu Lys Ile Ser Leu Ala Val Val Leu Ser Val Ile
35 40 45

Thr Leu Ala Thr Val Leu Ser Asn Ala Phe Val Leu Thr Thr Ile Leu
50 55 60

Leu Thr Arg Lys Leu His Thr Pro Ala Asn Tyr Leu Ile Gly Ser Leu
65 70 75 80

Ala Thr Thr Asp Leu Leu Val Ser Ile Leu Val Met Pro Ile Ser Ile
85 90 95

Ala Tyr Thr Ile Thr His Thr Trp Asn Phe Gly Gln Ile Leu Cys Asp
100 105 110

Ile Trp Leu Ser Ser Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His
115 120 125

Leu Cys Val Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Leu
130 135 140

Glu Tyr Ser Lys Arg Arg Thr Ala Gly His Ala Ala Thr Met Ile Ala
145 150 155 160

Ile Val Trp Ala Ile Ser Ile Cys Ile Ser Ile Pro Pro Leu Phe Trp
165 170 175

Arg Gln Ala Lys Ala Gln Glu Glu Met Ser Asp Cys Leu Val Asn Thr
180 185 190

Ser Gln Ile Ser Tyr Thr Ile Tyr Ser Thr Cys Gly Ala Phe Tyr Ile
195 200 205

Pro Ser Val Leu Leu Ile Ile Leu Tyr Gly Arg Ile Tyr Arg Ala Ala
210 215 220

Arg Asn Arg Ile Leu Asn Pro Pro Ser Leu Tyr Gly Lys Arg Phe Thr
 225 230 235 240
 Thr Ala His Leu Ile Thr Gly Ser Ala Gly Ser Ser Leu Cys Ser Leu
 245 250 255
 Asn Ser Ser Leu His Glu Gly His Ser His Ser Ala Gly Ser Pro Leu
 260 265 270
 Phe Phe Asn His Val Lys Ile Lys Leu Ala Asp Ser Ala Leu Glu Arg
 275 280 285
 Lys Arg Ile Ser Ala Ala Arg Glu Arg Lys Ala Lys Lys Ile Leu Gly
 290 295 300
 Ile Ile Leu Gly Ala Phe Ile Ile Cys Trp Leu Pro Phe Phe Val Val
 305 310 315 320
 Ser Leu Val Leu Pro Ile Cys Arg Asp Ser Cys Trp Ile His Pro Ala
 325 330 335
 Leu Phe Asp Phe Phe Thr Trp Leu Gly Tyr Leu Asn Ser Leu Ile Asn
 340 345 350
 Pro Ile Ile Tyr Thr Val Phe Asn Glu Glu Phe Arg Gln Ala Phe Gln
 355 360 365
 Lys Ile Val Pro Phe Arg Lys Ala Ser
 370 375

<210> 430
 <211> 1098
 <212> DNA
 <213> Homo sapiens

<400> 430
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 ttggctgtga tcatggctat tggcaccacc aagaagctcc accagcctgc caactaccta 180
 atctgtttctc tggccgtgac ggacctcctg gtggcagtgcc tcgtcatgcc cctgagcatc 240
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 atctacacca tttactccac gctgggtgcg ttttatatcc ccttgacttt gatactgatt 600
 ctctattacc ggatttacca cgcggccaag agcctttacc agaaaagggg atcaagtcgg 660
 cacttaagca acagaagcac agatagccag aattcttttg caagttgtaa acttacacag 720
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 attttatcct ggctgccatt tttcatcaaa gagttgattg tgggtctgag catctacacc 960
 gtgtcctcgg aagtggccga ctttctgacg tggctcggtt atgtgaattc tctgatcaac 1020
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 tgccgagagc atacttag 1098

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Met Asn Ile Thr Asn Cys Thr Thr Glu Ala Ser Met Ala Ile Arg Pro
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Thr Thr Leu Thr Thr Leu Leu Asn Leu Ala Val Ile Met Ala Ile Gly
35 40 45

Ala Val Thr Asp Leu Leu Val Ala Val Leu Val Met Pro Leu Ser Ile
65 70 75 80

Val Trp Leu Ser Val Asp Met Thr Cys Cys Thr Cys Ser Ile Leu His
100 105 110

Glu Tyr Ala Arg Lys Arg Thr Ala Lys Arg Ala Ala Leu Met Ile Leu
130 135 140

Thr Val Trp Thr Ile Ser Ile Phe Ile Ser Met Pro Pro Leu Phe Trp
145 150 155 160

Arg Ser His Arg Arg Leu Ser Pro Pro Pro Ser Gln Cys Thr Ile Gln
165 170 175

His Asp His Val Ile Tyr Thr Ile Tyr Ser Thr Leu Gly Ala Phe Tyr
180 185 190

Ile Pro Leu Thr Leu Ile Leu Ile Leu Tyr Tyr Arg Ile Tyr His Ala
195 200 205

Ala Lys Ser Leu Tyr Gln Lys Arg Gly Ser Ser Arg His Leu Ser Asn
210 215 220

Arg Ser Thr Asp Ser Gln Asn Ser Phe Ala Ser Cys Lys Leu Thr Gln
225 230 235 240

Thr Phe Cys Val Ser Asp Phe Ser Thr Ser Asp Pro Thr Thr Glu Phe
245 250 255

Glu Lys Phe His Ala Ser Ile Arg Ile Pro Pro Phe Asp Asn Asp Leu
260 265 270

Asp His Pro Gly Glu Arg Gln Gln Ile Ser Ser Thr Arg Glu Arg Lys
 275 280 285
 Ala Lys Arg Ile Leu Gly Leu Ile Leu Gly Ala Phe Ile Leu Ser Trp
 290 295 300
 Leu Pro Phe Phe Ile Lys Glu Leu Ile Val Gly Leu Ser Ile Tyr Thr
 305 310 315 320
 Val Ser Ser Glu Val Ala Asp Phe Leu Thr Trp Leu Gly Tyr Val Asn
 325 330 335
 Ser Leu Ile Asn Pro Leu Leu Tyr Thr Ser Phe Asn Glu Asp Phe Lys
 340 345 350
 Leu Ala Phe Lys Lys Leu Ile Arg Cys Arg Glu His Thr
 355 360 365

<210> 432
 <211> 1101
 <212> DNA
 <213> Homo sapiens

<400> 432
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 aactcccttg tgatcgctgc aattattgtg acccggaagc tgcaccatcc agccaattat 180
 ttaatttggt cccttgagcgt cacagatttt cttgtggctg tcctgggtgat gcccttcagc 240
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 ggcattatga ttacaatagt ttggattata tctgttttta tctctatgcc tcctctattc 480
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 tccaccattt actcaacatt tggagctttc tacatcccac tggcattgat tttgatcctt 600
 tactacaaaa tatatagagc agcaaagaca ttataccaca agagacaagc aagtaggatt 660
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<210> 433
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 433
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405040-6052860

20					25					30						
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Ile	Val	Thr	Arg	Lys	Leu	His	His	Pro	Ala	Asn	Tyr	Leu	Ile	Cys	Ser	
	50					55					60					
Leu	Ala	Val	Thr	Asp	Phe	Leu	Val	Ala	Val	Leu	Val	Met	Pro	Phe	Ser	
	65					70					75					80
Ile	Val	Tyr	Ile	Val	Arg	Glu	Ser	Trp	Ile	Met	Gly	Gln	Val	Val	Cys	
				85					90					95		
Asp	Ile	Trp	Leu	Ser	Val	Asp	Ile	Thr	Cys	Cys	Thr	Cys	Ser	Ile	Leu	
			100					105					110			
His	Leu	Ser	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Arg	Ala	Ile	Thr	Asp	Ala	
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Val	Glu	Tyr	Ala	Arg	Lys	Arg	Thr	Pro	Lys	His	Ala	Gly	Ile	Met	Ile	
	130					135					140					
Thr	Ile	Val	Trp	Ile	Ile	Ser	Val	Phe	Ile	Ser	Met	Pro	Pro	Leu	Phe	
	145					150					155				160	
Trp	Arg	His	Gln	Gly	Thr	Ser	Arg	Asp	Asp	Glu	Cys	Ile	Ile	Lys	His	
			165						170					175		
Asp	His	Ile	Val	Ser	Thr	Ile	Tyr	Ser	Thr	Phe	Gly	Ala	Phe	Tyr	Ile	
			180					185					190			
Pro	Leu	Ala	Leu	Ile	Leu	Ile	Leu	Tyr	Tyr	Lys	Ile	Tyr	Arg	Ala	Ala	
		195					200					205				
Lys	Thr	Leu	Tyr	His	Lys	Arg	Gln	Ala	Ser	Arg	Ile	Ala	Lys	Glu	Glu	
	210					215					220					
Val	Asn	Gly	Gln	Val	Leu	Leu	Glu	Ser	Gly	Glu	Lys	Ser	Thr	Lys	Ser	
	225					230					235				240	
Val	Ser	Thr	Ser	Tyr	Val	Leu	Glu	Lys	Ser	Leu	Ser	Asp	Pro	Ser	Thr	
			245					250					255			
Asp	Phe	Asp	Lys	Ile	His	Ser	Thr	Val	Arg	Ser	Leu	Arg	Ser	Glu	Phe	
			260					265					270			
Lys	His	Glu	Lys	Ser	Trp	Arg	Arg	Gln	Lys	Ile	Ser	Gly	Thr	Arg	Glu	
		275					280					285				
Arg	Lys	Ala	Lys	Thr	Thr	Leu	Gly	Leu	Ile	Leu	Gly	Ala	Phe	Val	Ile	
	290					295					300					
Cys	Trp	Leu	Pro	Phe	Phe	Val	Lys	Glu	Leu	Val	Val	Asn	Val	Cys	Asp	
	305					310					315				320	
Lys	Cys	Lys	Ile	Ser	Glu	Glu	Met	Ser	Asn	Phe	Leu	Ala	Trp	Leu	Gly	

325

330

335

Tyr Leu Asn Ser Leu Ile Asn Pro Leu Ile Tyr Thr Ile Phe Asn Glu
 340 345 350

Asp Phe Lys Lys Ala Phe Gln Lys Leu Val Arg Cys Arg Cys
 355 360 365

<210> 434
 <211> 1446
 <212> DNA
 <213> Homo sapiens

<400> 434
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 gaggaaatga aacagattgt tgaggaacag ggaaataaac tgcactgggc agctcttctg 180
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 35 40 45

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Ile	Ile	Pro	Thr	Ile	Gly	Gly	Asn	Thr	Leu	Val	Ile	Leu	Ala	Val	Ser
65					70					75					80
Leu	Glu	Lys	Lys	Leu	Gln	Tyr	Ala	Thr	Asn	Tyr	Phe	Leu	Met	Ser	Leu
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Ala	Val	Ala	Asp	Leu	Leu	Val	Gly	Leu	Phe	Val	Met	Pro	Ile	Ala	Leu
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Leu	Thr	Ile	Met	Phe	Glu	Ala	Met	Trp	Pro	Leu	Pro	Leu	Val	Leu	Cys
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His	Leu	Cys	Ala	Ile	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Ile	Lys	Lys	Pro
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Ile	Gln	Ala	Asn	Gln	Tyr	Asn	Ser	Arg	Ala	Thr	Ala	Phe	Ile	Lys	Ile
			165						170					175	
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			180					185					190		
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Ile	His	Ala	Leu	Gln	Lys	Lys	Ala	Tyr	Leu	Val	Lys	Asn	Lys	Pro	Pro
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Gln	Arg	Leu	Thr	Trp	Leu	Thr	Val	Ser	Thr	Val	Phe	Gln	Arg	Asp	Glu
			260					265					270		
Thr	Pro	Cys	Ser	Ser	Pro	Glu	Lys	Val	Ala	Met	Leu	Asp	Gly	Ser	Arg
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Arg	Ala	Lys	Lys	Val	Leu	Gly	Ile	Val	Phe	Phe	Leu	Phe	Leu	Leu	Met
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Trp	Cys	Pro	Phe	Phe	Ile	Thr	Asn	Ile	Thr	Leu	Val	Leu	Cys	Asp	Ser
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Cys Asn Gln Thr Thr Leu Gln Met Leu Leu Glu Ile Phe Val Trp Ile
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 Gly Tyr Val Ser Ser Gly Val Asn Pro Leu Val Tyr Thr Leu Phe Asn
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 385 390 395 400
 Ala Thr Lys Ser Val Lys Thr Leu Arg Lys Arg Ser Ser Lys Ile Tyr
 405 410 415
 Phe Arg Asn Pro Met Ala Glu Asn Ser Lys Phe Phe Lys Lys His Gly
 420 425 430
 Ile Arg Asn Gly Ile Asn Pro Ala Met Tyr Gln Ser Pro Met Arg Leu
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 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
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 Ala Asp Leu Leu Val Ser Val Leu Val Met Pro Phe Gly Ala Ile Glu
 65 70 75 80
 Leu Val Gln Asp Ile Trp Ile Tyr Gly Glu Val Phe Cys Leu Val Arg
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 Thr Ser Leu Asp Val Leu Leu Thr Thr Ala Ser Ile Phe His Leu Cys
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<212> DNA
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<211> 1164

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<211> 1167

<212> DNA

<213> Homo sapiens

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<211> 388

<212> PRT

<213> Homo sapiens

<400> 439

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			20					25					30		
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Gln	Leu	Arg	Lys	Ile	Lys	Thr	Asn	Tyr	Phe	Ile	Val	Ser	Leu	Ala	Phe
	50					55					60				
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65					70				75						80
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Thr	Ser	Leu	Asp	Val	Leu	Leu	Thr	Thr	Ala	Ser	Ile	Phe	His	Leu	Cys
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Cys	Ile	Ser	Leu	Asp	Arg	Tyr	Tyr	Ala	Ile	Cys	Cys	Gln	Pro	Leu	Val
		115					120					125			
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Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn
				165					170					175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr
			180					185					190		
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met
		195					200					205			
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His
	210					215					220				
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro
225					230					235					240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys
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Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp
			260					265					270		
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr
		275					280					285			
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Arg Ala Phe Leu Ile Ile Leu Cys Cys Asp Asp Glu Arg Tyr Arg Arg
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Pro Ser Ile Leu Gly Gln Thr Val Pro Cys Ser Thr Thr Thr Ile Asn
340 345 350

Gly Ser Thr His Val Leu Arg Asp Ala Val Glu Cys Gly Gly Gln Trp
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Glu Ser Gln Cys His Pro Pro Ala Thr Ser Pro Leu Val Ala Ala Gln
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<211> 1152
<212> DNA
<213> Homo sapiens

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<211> 380
<212> PRT
<213> Homo sapiens

<400> 441
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 340 345 350

Gly Ser Thr His Val Leu Ser Ser Gly Thr Glu Thr Asp Arg Arg Asn
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Phe Gly Ile Arg Lys Arg Arg Leu Thr Lys Pro Ser
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 <212> DNA
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 <212> PRT
 <213> Homo sapiens

<400> 443
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 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60

Ala	Asp	Leu	Leu	Val	Ser	Val	Leu	Val	Met	Pro	Phe	Gly	Ala	Ile	Glu	65	70	75	80
Leu	Val	Gln	Asp	Ile	Trp	Ile	Tyr	Gly	Glu	Val	Phe	Cys	Leu	Val	Arg	85	90	95	
Thr	Ser	Leu	Asp	Val	Leu	Leu	Thr	Thr	Ala	Ser	Ile	Phe	His	Leu	Cys	100	105	110	
Cys	Ile	Ser	Leu	Asp	Arg	Tyr	Tyr	Ala	Ile	Cys	Cys	Gln	Pro	Leu	Val	115	120	125	
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly	130	135	140	
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly	145	150	155	160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn	165	170	175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr	180	185	190	
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met	195	200	205	
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His	210	215	220	
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro	225	230	235	240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys	245	250	255	
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Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr	275	280	285	
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Arg	Ala	Phe	Leu	Ile	Ile	Leu	Cys	Cys	Asp	Asp	Glu	Arg	Tyr	Arg	Arg	325	330	335	
Pro	Ser	Ile	Leu	Gly	Gln	Thr	Val	Pro	Cys	Ser	Thr	Thr	Thr	Ile	Asn	340	345	350	
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 <211> 1137
 <212> DNA
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<210> 445
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 445
 Met Asp Lys Leu Asp Ala Asn Val Ser Ser Glu Glu Gly Phe Gly Ser
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 20 25 30
 Ala Ile Leu Gly Asn Leu Leu Val Met Val Ala Val Cys Trp Asp Arg
 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60
 Ala Asp Leu Leu Val Ser Val Leu Val Met Pro Phe Gly Ala Ile Glu
 65 70 75 80
 Leu Val Gln Asp Ile Trp Ile Tyr Gly Glu Val Phe Cys Leu Val Arg
 85 90 95
 Thr Ser Leu Asp Val Leu Leu Thr Thr Ala Ser Ile Phe His Leu Cys
 100 105 110
 Cys Ile Ser Leu Asp Arg Tyr Tyr Ala Ile Cys Cys Gln Pro Leu Val

115					120					125					
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly
130						135					140				
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly
145					150					155					160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn
				165					170					175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr
			180					185					190		
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met
		195					200					205			
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His
	210					215					220				
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro
225					230					235					240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys
				245					250					255	
Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp
			260					265					270		
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr
		275					280					285			
Val	Pro	Gly	Gln	Val	Trp	Thr	Ala	Phe	Leu	Trp	Leu	Gly	Tyr	Ile	Asn
	290					295					300				
Ser	Gly	Leu	Asn	Pro	Phe	Leu	Tyr	Ala	Phe	Leu	Asn	Lys	Ser	Phe	Arg
305					310					315					320
Arg	Ala	Phe	Leu	Ile	Ile	Leu	Cys	Cys	Asp	Asp	Glu	Arg	Tyr	Arg	Arg
				325					330					335	
Pro	Ser	Ile	Leu	Gly	Gln	Thr	Val	Pro	Cys	Ser	Thr	Thr	Thr	Ile	Asn
			340					345					350		
Gly	Ser	Thr	His	Val	Leu	Ser	Gly	Cys	Ser	Pro	Val	Ser	Ser	Phe	Leu
		355					360					365			
Leu	Leu	Phe	Cys	Asn	Arg	Pro	Val	Pro	Val						
	370					375									

<210> 446
 <211> 1074
 <212> DNA
 <213> Homo sapiens
 <400> 446

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tccatggccg tctcggatgt cctggtggcc gcgctggtca tgccgctgag cctggtgcat 300
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<210> 447
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 447

Met	Asp	Leu	Pro	Val	Asn	Leu	Thr	Ser	Phe	Ser	Leu	Ser	Thr	Pro	Ser
1				5					10					15	
Pro	Leu	Glu	Thr	Asn	His	Ser	Leu	Gly	Lys	Asp	Asp	Leu	Arg	Pro	Ser
			20					25					30		
Ser	Pro	Leu	Leu	Ser	Val	Phe	Gly	Val	Leu	Ile	Leu	Thr	Leu	Leu	Gly
		35					40					45			
Phe	Leu	Val	Ala	Ala	Thr	Phe	Ala	Trp	Asn	Leu	Leu	Val	Leu	Ala	Thr
	50					55					60				
Ile	Leu	Arg	Val	Arg	Thr	Phe	His	Arg	Val	Pro	His	Asn	Leu	Val	Ala
65					70					75					80
Ser	Met	Ala	Val	Ser	Asp	Val	Leu	Val	Ala	Ala	Leu	Val	Met	Pro	Leu
				85					90					95	
Ser	Leu	Val	His	Glu	Leu	Ser	Gly	Arg	Arg	Trp	Gln	Leu	Gly	Arg	Arg
			100					105					110		
Leu	Cys	Gln	Leu	Trp	Ile	Ala	Cys	Asp	Val	Leu	Cys	Cys	Thr	Ala	Ser
		115					120					125			
Ile	Trp	Asn	Val	Thr	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Trp	Ser	Ile	Thr
	130					135						140			
Arg	His	Met	Glu	Tyr	Thr	Leu	Arg	Thr	Arg	Lys	Cys	Val	Ser	Asn	Val
145					150					155					160
Met	Ile	Ala	Leu	Thr	Trp	Ala	Leu	Ser	Ala	Val	Ile	Ser	Leu	Ala	Pro

165	170	175
Leu Leu Phe Gly Trp Gly Glu Thr Tyr Ser Glu Gly Ser Glu Glu Cys		
180	185	190
Gln Val Ser Arg Glu Pro Ser Tyr Ala Val Phe Ser Thr Val Gly Ala		
195	200	205
Phe Tyr Leu Pro Leu Cys Val Val Leu Phe Val Tyr Trp Lys Ile Tyr		
210	215	220
Lys Ala Ala Lys Phe Arg Val Gly Ser Arg Lys Thr Asn Ser Val Ser		
225	230	235
Pro Ile Ser Glu Ala Val Glu Val Lys Asp Ser Ala Lys Gln Pro Gln		
245	250	255
Met Val Phe Thr Val Arg His Ala Thr Val Thr Phe Gln Pro Glu Gly		
260	265	270
Asp Thr Trp Arg Glu Gln Lys Glu Gln Arg Ala Lys Leu Met Val Gly		
275	280	285
Ile Leu Ile Gly Val Phe Val Leu Cys Trp Ile Pro Phe Phe Leu Thr		
290	295	300
Glu Leu Ile Ser Pro Leu Cys Ser Cys Asp Ile Pro Ala Ile Trp Lys		
305	310	315
Ser Ile Phe Leu Trp Leu Gly Tyr Ser Asn Ser Phe Phe Asn Pro Leu		
325	330	335
Ile Tyr Thr Ala Phe Asn Lys Asn Tyr Asn Ser Ala Phe Lys Asn Phe		
340	345	350
Phe Ser Arg Gln His		
355		

<210> 448
 <211> 1323
 <212> DNA
 <213> Homo sapiens

<400> 448
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 gcggcgggcca actcgtgct gatcgcgctc atctgcactc agcccgcgct gcgcaacacg 180
 tccaacttct tcctggtgtc gctcttcacg tctgacctga tgggtggggct ggtggtgatg 240
 ccgcccggcca tgctgaacgc gctgtacggg cgctgggtgc tggcgcgcgg cctctgcctg 300
 ctctggaccg ccttcgacgt gatgtgctgc agcgccctcca tcctcaacct ctgcctcatc 360
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 ctgcgtgccc tggccctagt cctggggcgcc tggagcctcg ccgctctcgc ctccttcctg 480
 cccctgctgc tgggctggca cgagctgggc caccgacggc caccgctccc tggccagtgc 540
 cgctgctggt ccagcctgcc ttttgtcctt gtggcgctcg gcctcacctt ctctctgccc 600
 tcgggtgccca tatgtttcac ctactgcagg atcctgctag ctgcccgcaa gcaggccgtg 660
 caggtggcct ccctcaccac cggcatggcc agtcaggcct cggagacgct gcaggtgccc 720

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tggttgccct tctttgtggc caacatagtc caggccgtgt gcgactgcat ctccccaggc 900
ctcttcgatg tcctcacatg gctgggttac tgtaacagca ccatgaacct catcatctac 960
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cctggcgagg ccaccagga cccccgctg cccaccagg ccgctgccc cgtcaatttc 1260
ttcaacatcg acccgcgga gcccgagctg cggccgcac cacttggcat cccacgaac 1320
tga 1323

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<210> 449
 <211> 440
 <212> PRT
 <213> Homo sapiens

<400> 449

Met	Val	Pro	Glu	Pro	Gly	Pro	Thr	Ala	Asn	Ser	Thr	Pro	Ala	Trp	Gly
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Ala	Gly	Pro	Pro	Ser	Ala	Pro	Gly	Gly	Ser	Gly	Trp	Val	Ala	Ala	Ala
			20					25					30		
Leu	Cys	Val	Val	Ile	Ala	Leu	Thr	Ala	Ala	Ala	Asn	Ser	Leu	Leu	Ile
	35						40					45			
Ala	Leu	Ile	Cys	Thr	Gln	Pro	Ala	Leu	Arg	Asn	Thr	Ser	Asn	Phe	Phe
	50					55					60				
Leu	Val	Ser	Leu	Phe	Thr	Ser	Asp	Leu	Met	Val	Gly	Leu	Val	Val	Met
	65				70					75					80
Pro	Pro	Ala	Met	Leu	Asn	Ala	Leu	Tyr	Gly	Arg	Trp	Val	Leu	Ala	Arg
				85					90					95	
Gly	Leu	Cys	Leu	Leu	Trp	Thr	Ala	Phe	Asp	Val	Met	Cys	Cys	Ser	Ala
			100					105					110		
Ser	Ile	Leu	Asn	Leu	Cys	Leu	Ile	Ser	Leu	Asp	Arg	Tyr	Leu	Leu	Ile
	115						120					125			
Leu	Ser	Pro	Leu	Arg	Tyr	Lys	Leu	Arg	Met	Thr	Pro	Leu	Arg	Ala	Leu
	130					135					140				
Ala	Leu	Val	Leu	Gly	Ala	Trp	Ser	Leu	Ala	Ala	Leu	Ala	Ser	Phe	Leu
145					150					155					160
Pro	Leu	Leu	Leu	Gly	Trp	His	Glu	Leu	Gly	His	Ala	Arg	Pro	Pro	Val
				165					170					175	
Pro	Gly	Gln	Cys	Arg	Leu	Leu	Ala	Ser	Leu	Pro	Phe	Val	Leu	Val	Ala
			180					185					190		
Ser	Gly	Leu	Thr	Phe	Phe	Leu	Pro	Ser	Gly	Ala	Ile	Cys	Phe	Thr	Tyr
	195						200					205			

Cys Arg Ile Leu Leu Ala Ala Arg Lys Gln Ala Val Gln Val Ala Ser
 210 215 220

Leu Thr Thr Gly Met Ala Ser Gln Ala Ser Glu Thr Leu Gln Val Pro
 225 230 235 240

Arg Thr Pro Arg Pro Gly Val Glu Ser Ala Asp Ser Arg Arg Leu Ala
 245 250 255

Thr Lys His Ser Arg Lys Ala Leu Lys Ala Lys Leu Thr Leu Gly Ile
 260 265 270

Leu Leu Gly Met Phe Phe Val Thr Trp Leu Pro Phe Phe Val Ala Asn
 275 280 285

Ile Val Gln Ala Val Cys Asp Cys Ile Ser Pro Gly Leu Phe Asp Val
 290 295 300

Leu Thr Trp Leu Gly Tyr Cys Asn Ser Thr Met Asn Pro Ile Ile Tyr
 305 310 315 320

Pro Leu Phe Met Arg Asp Phe Lys Arg Ala Leu Gly Arg Phe Leu Pro
 325 330 335

Cys Pro Arg Cys Pro Arg Glu Arg Gln Ala Ser Leu Ala Ser Pro Ser
 340 345 350

Leu Arg Thr Ser His Ser Gly Pro Arg Pro Gly Leu Ser Leu Gln Gln
 355 360 365

Val Leu Pro Leu Pro Leu Pro Pro Asp Ser Asp Ser Asp Ser Asp Ala
 370 375 380

Gly Ser Gly Gly Ser Ser Gly Leu Arg Leu Thr Ala Gln Leu Leu Leu
 385 390 395 400

Pro Gly Glu Ala Thr Gln Asp Pro Pro Leu Pro Thr Arg Ala Ala Ala
 405 410 415

Ala Val Asn Phe Phe Asn Ile Asp Pro Ala Glu Pro Glu Leu Arg Pro
 420 425 430

His Pro Leu Gly Ile Pro Thr Asn
 435 440

<210> 450
 <211> 1379
 <212> DNA
 <213> Homo sapiens

<400> 450
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 gcgggtcctt gggcgccgca cctgctgagc gaggtgacag ccagcccggc gccacctgg 180
 gacgcgcccc cggacaatgc ctccggctgt ggggaacaga tcaactacg cagagtcgag 240

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gtgtccctgg cgctggcga cctctcgggtg gctgtggcgg tcatgccctt cgtcagcgtc 420
accgacctca tcgggggcaa gtggatcttt ggacactttt tctgtaatgt cttcatcgcc 480
atggacgtca tgtgtgtcac ggcctcgatc atgacctgt gcgtgatcag cattgacagg 540
taccttgga tcacaaggcc cctcacatac cctgtgagga agaattggaa atgcatggcg 600
aagatgattc tctccgtctg gcttctctcc gcctccatca ccttacctcc actctttgga 660
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cttgcgtgaga ggccagagag acctgagttt gtgctacaaa atgctgacta ctgtagaaaa 1320
aaaggtcatg attcatgatt gaaagcagaa caatggagag gaattcgata tcaagctta 1379

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<210> 451
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 451

Met	Met	Asp	Val	Asn	Ser	Ser	Gly	Arg	Pro	Asp	Leu	Tyr	Gly	His	Leu
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Arg	Ser	Phe	Leu	Leu	Pro	Glu	Val	Gly	Arg	Gly	Leu	Pro	Asp	Leu	Ser
			20					25					30		
Pro	Asp	Gly	Gly	Ala	Asp	Pro	Val	Ala	Gly	Ser	Trp	Ala	Pro	His	Leu
		35					40					45			
Leu	Ser	Glu	Val	Thr	Ala	Ser	Pro	Ala	Pro	Thr	Trp	Asp	Ala	Pro	Pro
		50				55					60				
Asp	Asn	Ala	Ser	Gly	Cys	Gly	Glu	Gln	Ile	Asn	Tyr	Gly	Arg	Val	Glu
	65				70					75					80
Lys	Val	Val	Ile	Gly	Ser	Ile	Leu	Thr	Leu	Ile	Thr	Leu	Leu	Thr	Ile
			85					90						95	
Ala	Gly	Asn	Cys	Leu	Val	Val	Ile	Ser	Val	Cys	Phe	Val	Lys	Lys	Leu
		100						105					110		
Arg	Gln	Pro	Ser	Asn	Tyr	Leu	Ile	Val	Ser	Leu	Ala	Leu	Ala	Asp	Leu
		115					120					125			
Ser	Val	Ala	Val	Ala	Val	Met	Pro	Phe	Val	Ser	Val	Thr	Asp	Leu	Ile
		130				135						140			
Gly	Gly	Lys	Trp	Ile	Phe	Gly	His	Phe	Phe	Cys	Asn	Val	Phe	Ile	Ala
	145				150					155					160

005040-6052260

Met Asp Val Met Cys Cys Thr Ala Ser Ile Met Thr Leu Cys Val Ile
165 170 175

Ser Ile Asp Arg Tyr Leu Gly Ile Thr Arg Pro Leu Thr Tyr Pro Val
180 185 190

Arg Gln Asn Gly Lys Cys Met Ala Lys Met Ile Leu Ser Val Trp Leu
195 200 205

Leu Ser Ala Ser Ile Thr Leu Pro Pro Leu Phe Gly Trp Ala Gln Asn
210 215 220

Val Asn Asp Asp Lys Val Cys Leu Ile Ser Gln Asp Phe Gly Tyr Thr
225 230 235 240

Ile Tyr Ser Thr Ala Val Ala Phe Tyr Ile Pro Met Ser Val Met Leu
245 250 255

Phe Met Tyr Tyr Gln Ile Tyr Lys Ala Ala Arg Lys Ser Ala Ala Lys
260 265 270

His Lys Phe Pro Gly Phe Pro Arg Val Glu Pro Asp Ser Val Ile Ala
275 280 285

Leu Asn Gly Ile Val Lys Leu Gln Lys Glu Val Glu Glu Cys Ala Asn
290 295 300

Leu Ser Arg Leu Leu Lys His Glu Arg Lys Asn Ile Ser Ile Phe Lys
305 310 315 320

Arg Glu Gln Lys Ala Lys Thr Thr Leu Gly Ile Ile Val Gly Ala Phe
325 330 335

Thr Val Cys Trp Leu Pro Phe Phe Leu Leu Ser Thr Ala Arg Pro Phe
340 345 350

Ile Cys Gly Thr Ser Cys Ser Cys Ile Pro Leu Trp Val Glu Arg Thr
355 360 365

Phe Leu Trp Leu Gly Tyr Ala Asn Ser Leu Ile Asn Pro Phe Ile Tyr
370 375 380

Ala Phe Phe Asn Arg Asp Leu Arg Thr Thr Tyr Arg Ser Leu Leu Gln
385 390 395 400

Cys Gln Tyr Arg Asn Ile Asn Arg Lys Leu Ser Ala Ala Gly Met His
405 410 415

Glu Ala Leu Lys Leu Ala Glu Arg Pro Glu Arg Pro Glu Phe Val Leu
420 425 430

Gln Asn Ala Asp Tyr Cys Arg Lys Lys Gly His Asp Ser
435 440 445

<210> 452
<211> 1257

<212> DNA
<213> Homo sapiens

<400> 452
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ccaccgaggg acgtgcgcaa cgaggagctg gccaaactgg agatcgccgt gctggcggtg 180
actttcgcgg tggccgtgct gggcaacagc agcgtactgc tggctctgca cgggacgcgc 240
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caaagcttcc catgctgcc aacatgaag gaaaaattca acaaagaaga tactgacagt 1140
atgagcagaa gacagacttt ttattctaac aatcgaagcc caacaaacag tacgggtatg 1200
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<210> 453
<211> 418
<212> PRT
<213> Homo sapiens

<400> 453
Met Arg Leu Ser Ala Gly Pro Asp Ala Gly Pro Ser Gly Asn Ser Ser
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Pro Trp Trp Pro Leu Ala Thr Gly Ala Gly Asn Thr Ser Arg Glu Ala
20 25 30
Glu Ala Leu Gly Glu Gly Asn Gly Pro Pro Arg Asp Val Arg Asn Glu
35 40 45
Glu Leu Ala Lys Leu Glu Ile Ala Val Leu Ala Val Thr Phe Ala Val
50 55 60
Ala Val Leu Gly Asn Ser Ser Val Leu Leu Ala Leu His Arg Thr Pro
65 70 75 80
Arg Lys Thr Ser Arg Met His Leu Phe Ile Arg His Leu Ser Leu Ala
85 90 95
Asp Leu Ala Val Ala Phe Phe Gln Val Leu Pro Gln Met Cys Trp Asp
100 105 110
Ile Thr Tyr Arg Phe Arg Gly Pro Asp Trp Leu Cys Arg Val Val Lys
115 120 125

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<210> 454
 <211> 1275
 <212> DNA
 <213> Homo sapiens

<400> 454
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 ctggccactg tcctggtgct ggcgaccggg ggcaacctgg ctgtgctgct gaccctgggc 180
 cagctgggccc gcaagcgctc ccgcatgcac ctgttcgtgc tgcacttagc cctgacagac 240
 ctggccgtgg cgctcttcca ggtgctgcc cagctgctgt gggacatcac ctaccgcttc 300
 cagggccccc acctcctgtg cagggccgct aagtacctgc aggtgctcag catgtttgcc 360
 tccacctaca tgctgctggc catgacgctg gaccgctacc tggctgtctg tcacccctg 420
 cgcagcctcc agcagccagg ccagtcacc tacctgctca tcgctgctcc ctggctgctg 480
 gccgccatct tcagcctccc tcaagtcttc attttttccc tgcgggaggt gatccagggc 540
 tcaggggtgc tggactgctg ggcagacttc ggcttccctt gggggccacg ggcctacctc 600
 acctggacca ccctggctat ctctgttctg ccggtgacca tgctcacggc ctgctacagc 660
 ctcatctgcc atgagatctg taaaaaccta aaagtcaaga cacaggcctg gcgggtggga 720
 ggagggggct ggaggacttg ggacaggccc tcaccttcca ccttagctgc caccactcgg 780
 gggctgccat ctcggtcag cagcatcaac accatctcac gggccaagat ccgaacaaag 840
 aagatgacct ttgtcatcgt gctggcctac atcgcttgcg gggctccctt cttcagtgtc 900
 cagatgtggt ccgtgtggga caagaatgcc cctgatgaag attccaccaa tgtggctttc 960
 accatctcta tgcttttggg caacctcaac agctgctgca acccctggat ctacatgggc 1020
 ttcaacagcc acctgttacc gcggccctg cgctaccttg cctgctgtgg gggctcccag 1080
 cccaggatgc gccggcggct ctccgacggc agcctctcga gccgccacac cacgctgctg 1140
 acccgctcca gctgcccggc caccctcagc ctgagcctca gcctaaccct cagtgggagg 1200
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 accatcatct tttag 1275

<210> 455
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 455
 Met Asp Ser Gly Pro Leu Trp Asp Ala Asn Pro Thr Pro Arg Gly Thr
 1 5 10 15
 Leu Ser Ala Pro Asn Ala Thr Thr Pro Trp Leu Gly Arg Asp Glu Glu
 20 25 30
 Leu Ala Lys Val Glu Ile Gly Val Leu Ala Thr Val Leu Val Leu Ala
 35 40 45
 Thr Gly Gly Asn Leu Ala Val Leu Leu Thr Leu Gly Gln Leu Gly Arg
 50 55 60
 Lys Arg Ser Arg Met His Leu Phe Val Leu His Leu Ala Leu Thr Asp
 65 70 75 80
 Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln Leu Leu Trp Asp Ile
 85 90 95
 Thr Tyr Arg Phe Gln Gly Pro Asp Leu Leu Cys Arg Ala Val Lys Tyr
 100 105 110

Leu	Gln	Val	Leu	Ser	Met	Phe	Ala	Ser	Thr	Tyr	Met	Leu	Leu	Ala	Met
	115						120					125			
Thr	Leu	Asp	Arg	Tyr	Leu	Ala	Val	Cys	His	Pro	Leu	Arg	Ser	Leu	Gln
	130					135					140				
Gln	Pro	Gly	Gln	Ser	Thr	Tyr	Leu	Leu	Ile	Ala	Ala	Pro	Trp	Leu	Leu
145					150					155					160
Ala	Ala	Ile	Phe	Ser	Leu	Pro	Gln	Val	Phe	Ile	Phe	Ser	Leu	Arg	Glu
				165					170					175	
Val	Ile	Gln	Gly	Ser	Gly	Val	Leu	Asp	Cys	Trp	Ala	Asp	Phe	Gly	Phe
			180					185					190		
Pro	Trp	Gly	Pro	Arg	Ala	Tyr	Leu	Thr	Trp	Thr	Thr	Leu	Ala	Ile	Phe
		195					200					205			
Val	Leu	Pro	Val	Thr	Met	Leu	Thr	Ala	Cys	Tyr	Ser	Leu	Ile	Cys	His
	210					215					220				
Glu	Ile	Cys	Lys	Asn	Leu	Lys	Val	Lys	Thr	Gln	Ala	Trp	Arg	Val	Gly
225					230					235					240
Gly	Gly	Gly	Trp	Arg	Thr	Trp	Asp	Arg	Pro	Ser	Pro	Ser	Thr	Leu	Ala
				245					250					255	
Ala	Thr	Thr	Arg	Gly	Leu	Pro	Ser	Arg	Val	Ser	Ser	Ile	Asn	Thr	Ile
			260					265					270		
Ser	Arg	Ala	Lys	Ile	Arg	Thr	Lys	Lys	Met	Thr	Phe	Val	Ile	Val	Leu
		275					280					285			
Ala	Tyr	Ile	Ala	Cys	Trp	Ala	Pro	Phe	Phe	Ser	Val	Gln	Met	Trp	Ser
	290					295					300				
Val	Trp	Asp	Lys	Asn	Ala	Pro	Asp	Glu	Asp	Ser	Thr	Asn	Val	Ala	Phe
305					310					315					320
Thr	Ile	Ser	Met	Leu	Leu	Gly	Asn	Leu	Asn	Ser	Cys	Cys	Asn	Pro	Trp
			325					330						335	
Ile	Tyr	Met	Gly	Phe	Asn	Ser	His	Leu	Leu	Pro	Arg	Pro	Leu	Arg	His
		340						345					350		
Leu	Ala	Cys	Cys	Gly	Gly	Pro	Gln	Pro	Arg	Met	Arg	Arg	Arg	Leu	Ser
		355					360					365			
Asp	Gly	Ser	Leu	Ser	Ser	Arg	His	Thr	Thr	Leu	Leu	Thr	Arg	Ser	Ser
	370					375					380				
Cys	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Leu	Ser	Leu	Thr	Leu	Ser	Gly	Arg
385					390					395					400
Pro	Arg	Pro	Glu	Glu	Ser	Pro	Arg	Asp	Leu	Glu	Leu	Ala	Asp	Gly	Glu
			405						410					415	

Gly Thr Ala Glu Thr Ile Ile Phe
420

<210> 456
<211> 1116
<212> DNA
<213> Homo sapiens

<400> 456
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ctggcgctgc tctccatagt ctttgtggct gtggccctga gcaatggcct ggtgctggcg 180
gccctagctc ggcggggccg gcggggccac tgggcaccca tacacgtctt cattggccac 240
ttgtgcctgg ccgacctggc cgtggctctg ttccaagtgc tgccccagct ggcctggaag 300
gccaccgacc gcttccgtgg gccagatgcc ctgtgtcggg ccgtgaagta tctgcagatg 360
gtgggcatgt atgcctcctc ctacatgac ctggccatga cgctggaccg ccaccgtgcc 420
atctgccgtc ccatgctggc gtaccgccat ggaagtgggg ctactggaa ccggccgggtg 480
ctagtggctt gggccttctc gctccttctc agcctgcccc agctcttcat cttcgcccag 540
cgcaacgtgg aaggtggcag cgggggtcact gactgctggg cctgctttgc ggagccctgg 600
ggcgtgcga cctatgtcac ctggattgcc ctgatgggtg tcgtggcacc taccctgggt 660
atcgccgcct gccaggtgct catcttccgg gagattcatg ccagtctggt gccagggcca 720
tcagagaggg ctggggggcg ccgcagggga cgccggacag gcagccccgg tgaggagacc 780
cacgtgtcag cagctgtggc caagactaag aggatgacgc tagtgattgt ggtcgtctat 840
gtgctgtgct gggcaccctt cttcctgggt cagctgtggg ccgcgtggga cccggaggca 900
cctctggaag gggcgccctt tgtgtactc atgttctgtg ccagcctcaa cagctgcacc 960
aacccttgga tctatgcac tttcagcagc agcgtgtcct cagagctgcg aagcttgctc 1020
tgctgtgccc ggggacgcac cccaccacgc ctgggtcccc aagatgagtc ctgcaccacc 1080
gccagctcct ccctggccaa ggacatttca tcgtga 1116

<210> 457
<211> 371
<212> PRT
<213> Homo sapiens

<400> 457
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Pro Ser Leu Pro Ser Asn Ser Ser Gln Glu Arg Pro Leu Asp Thr Arg
20 25 30
Asp Pro Leu Leu Ala Arg Ala Glu Leu Ala Leu Leu Ser Ile Val Phe
35 40 45
Val Ala Val Ala Leu Ser Asn Gly Leu Val Leu Ala Ala Leu Ala Arg
50 55 60
Arg Gly Arg Arg Gly His Trp Ala Pro Ile His Val Phe Ile Gly His
65 70 75 80
Leu Cys Leu Ala Asp Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln
85 90 95
Leu Ala Trp Lys Ala Thr Asp Arg Phe Arg Gly Pro Asp Ala Leu Cys

100	105	110
Arg Ala Val Lys Tyr Leu Gln Met Val Gly Met Tyr Ala Ser Ser Tyr		
115	120	125
Met Ile Leu Ala Met Thr Leu Asp Arg His Arg Ala Ile Cys Arg Pro		
130	135	140
Met Leu Ala Tyr Arg His Gly Ser Gly Ala His Trp Asn Arg Pro Val		
145	150	155
Leu Val Ala Trp Ala Phe Ser Leu Leu Leu Ser Leu Pro Gln Leu Phe		
	165	170
		175
Ile Phe Ala Gln Arg Asn Val Glu Gly Gly Ser Gly Val Thr Asp Cys		
	180	185
		190
Trp Ala Cys Phe Ala Glu Pro Trp Gly Arg Arg Thr Tyr Val Thr Trp		
	195	200
		205
Ile Ala Leu Met Val Phe Val Ala Pro Thr Leu Gly Ile Ala Ala Cys		
	210	215
		220
Gln Val Leu Ile Phe Arg Glu Ile His Ala Ser Leu Val Pro Gly Pro		
	225	230
		235
Ser Glu Arg Pro Gly Gly Arg Arg Arg Gly Arg Arg Thr Gly Ser Pro		
	245	250
		255
Gly Glu Gly Ala His Val Ser Ala Ala Val Ala Lys Thr Lys Arg Met		
	260	265
		270
Thr Leu Val Ile Val Val Val Tyr Val Leu Cys Trp Ala Pro Phe Phe		
	275	280
		285
Leu Val Gln Leu Trp Ala Ala Trp Asp Pro Glu Ala Pro Leu Glu Gly		
	290	295
		300
Ala Pro Phe Val Leu Leu Met Leu Leu Ala Ser Leu Asn Ser Cys Thr		
	305	310
		315
Asn Pro Trp Ile Tyr Ala Ser Phe Ser Ser Ser Val Ser Ser Glu Leu		
	325	330
		335
Arg Ser Leu Leu Cys Cys Ala Arg Gly Arg Thr Pro Pro Ser Leu Gly		
	340	345
		350
Pro Gln Asp Glu Ser Cys Thr Thr Ala Ser Ser Ser Leu Ala Lys Asp		
	355	360
		365
Thr Ser Ser		
370		

<210> 458
 <211> 1200
 <212> DNA

<213> Homo sapiens

<400> 458

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tctccaggaa tagaagcatt gtgtgccatc tatattactt atgctgtgat catttcagt 180
ggcatccttg gaaatgctat tctcatcaaa gtctttttca agaccaaata catgcaaaca 240
gttccaaata ttttcatcac cagcctgggt tttggagatc ttttacttct gctaacttgt 300
gtgccagtgg atgcaactca ctaccttgca gaaggatggc tgttcggaag aattgggtgt 360
aagggtgctc ttttcatccg gctcacttct gttgggtgtg cagtgttcac attaacaatt 420
ctcagcgctg acagatacaa ggcagttgtg aagccacttg agcgacagcc ctccaatgcc 480
atcctgaaga cttgtgtaaa agctggctgc gtctggatcg tgtctatgat atttgctcta 540
cctgaggcta ttttttcaaa tgtatacact tttcgagatc ccaataaaaa tatgacattt 600
gaatcatgta cctcttatcc tgtctctaag aagctcttgc aagaaatata ttctctgctg 660
tgcttcttag tgttctacat tattccactc tctattatct ctgtctacta ttccttgatt 720
gctaggaccc tttacaaaag caccctgaac atacctactg aggaacaaag ccatgcccg 780
aagcagattg aatcccgaaa gagaattaaa agaacgggat tgggtgttgt ggctctgtt 840
gccctctgct ggttgccaaa tcacctctg tacctctacc attcattcac ttctcaaacc 900
tatgtagacc cctctgccat gcatttcatt ttcaccattt tctctcgggt tttggctttc 960
agcaattctt gcgtaaaccc ctttgctctc tactggctga gcaaaagctt ccagaagcat 1020
tttaaagctc agttgttctg ttgcaaggcg gagcggcctg agcctcctgt tgctgacacc 1080
tctcttacca ccctggctgt gatgggaacg gtcccgggca ctgggagcat acagatgtct 1140
gaaattagtg tgacctcggt cactgggtgt agtgtgaagc aggcagagga cagattctag 1200
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<210> 459

<211> 399

<212> PRT

<213> Homo sapiens

<400> 459

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Thr Asn Asp Thr Glu Ser Ser Ser Ser Val Val Ser Asn Asp Asn Thr
      20                      25                      30

Asn Lys Gly Trp Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys
      35                      40                      45

Ala Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly
      50                      55                      60

Asn Ala Ile Leu Ile Lys Val Phe Phe Lys Thr Lys Ser Met Gln Thr
      65                      70                      75                      80

Val Pro Asn Ile Phe Ile Thr Ser Leu Ala Phe Gly Asp Leu Leu Leu
      85                      90                      95

Leu Leu Thr Cys Val Pro Val Asp Ala Thr His Tyr Leu Ala Glu Gly
      100                      105                      110

Trp Leu Phe Gly Arg Ile Gly Cys Lys Val Leu Ser Phe Ile Arg Leu
      115                      120                      125

Thr Ser Val Gly Val Ser Val Phe Thr Leu Thr Ile Leu Ser Ala Asp
      130                      135                      140
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00540-005250

Arg	Tyr	Lys	Ala	Val	Val	Lys	Pro	Leu	Glu	Arg	Gln	Pro	Ser	Asn	Ala
145					150					155					160
Ile	Leu	Lys	Thr	Cys	Val	Lys	Ala	Gly	Cys	Val	Trp	Ile	Val	Ser	Met
				165					170					175	
Ile	Phe	Ala	Leu	Pro	Glu	Ala	Ile	Phe	Ser	Asn	Val	Tyr	Thr	Phe	Arg
			180					185					190		
Asp	Pro	Asn	Lys	Asn	Met	Thr	Phe	Glu	Ser	Cys	Thr	Ser	Tyr	Pro	Val
		195					200					205			
Ser	Lys	Lys	Leu	Leu	Gln	Glu	Ile	His	Ser	Leu	Leu	Cys	Phe	Leu	Val
	210					215					220				
Phe	Tyr	Ile	Ile	Pro	Leu	Ser	Ile	Ile	Ser	Val	Tyr	Tyr	Ser	Leu	Ile
225					230					235					240
Ala	Arg	Thr	Leu	Tyr	Lys	Ser	Thr	Leu	Asn	Ile	Pro	Thr	Glu	Glu	Gln
				245					250					255	
Ser	His	Ala	Arg	Lys	Gln	Ile	Glu	Ser	Arg	Lys	Arg	Ile	Lys	Arg	Thr
			260					265					270		
Val	Leu	Val	Leu	Val	Ala	Leu	Phe	Ala	Leu	Cys	Trp	Leu	Pro	Asn	His
		275					280					285			
Leu	Leu	Tyr	Leu	Tyr	His	Ser	Phe	Thr	Ser	Gln	Thr	Tyr	Val	Asp	Pro
	290					295					300				
Ser	Ala	Met	His	Phe	Ile	Phe	Thr	Ile	Phe	Ser	Arg	Val	Leu	Ala	Phe
305				310						315					320
Ser	Asn	Ser	Cys	Val	Asn	Pro	Phe	Ala	Leu	Tyr	Trp	Leu	Ser	Lys	Ser
			325						330					335	
Phe	Gln	Lys	His	Phe	Lys	Ala	Gln	Leu	Phe	Cys	Cys	Lys	Ala	Glu	Arg
			340					345					350		
Pro	Glu	Pro	Pro	Val	Ala	Asp	Thr	Ser	Leu	Thr	Thr	Leu	Ala	Val	Met
		355					360					365			
Gly	Thr	Val	Pro	Gly	Thr	Gly	Ser	Ile	Gln	Met	Ser	Glu	Ile	Ser	Val
	370					375					380				
Thr	Ser	Phe	Thr	Gly	Cys	Ser	Val	Lys	Gln	Ala	Glu	Asp	Arg	Phe	
385					390					395					

<210> 460
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 460
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gtcttctctc tgcctccggcg gcaactgaac gtggcagaaa tctacctggc caacctggca 240
gcctctgata tgggtgtttgt cttgggcttg cccttctggg cagagaatat ctggaaccag 300
tttaactggc ctttcggagc cctcctctgc cgtgtcatca acgggggtcat caaggccaat 360
ttgttcatca gcatcttcct ggtggtggcc atcagccagg accgctaccg cgtgctggtg 420
caccctatgg ccagccggag gcagcagcgg cggaggcagg cccgggtcac ctgctgtctc 480
atctgggttg tggggggcct cttgagcatc cccacattcc tgctgcatc catccaagcc 540
gtcccagatc tgaacatcac cgctgcatc ctgctcctcc cccatgaggc ctggcacttt 600
gcaaggattg tggagttaaa tattctgggt ttctcctac cactggctgc gatcgtcttc 660
ttcaactacc acatcctggc ctccctgcga acgcgggagg aggtcagcag gacaagggtgc 720
gggggcccga aggatagcaa gaccaaagcg ctgatcctca cgctcgtggt tgccttctctg 780
gtctgctggg ccccttacca cttctttgcc ttcttggaat tcttattcca ggtgcaagca 840
gtccgaggct gcttttggga ggacttcatt gacctgggcc tgcaattggc caacttcttt 900
gccttcacta acagctccct gaatccagta atttatgtct ttgtgggccg gctcttcagg 960
accaaggtct gggaaacttta taaacaatgc acccctaaaa gtcttgctcc aatatcttca 1020
tcccatagga aagaaatctt ccaacttttc tggcggaatt aa 1062

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<210> 461
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 461

Met	Ala	Ser	Ser	Trp	Pro	Pro	Leu	Glu	Leu	Gln	Ser	Ser	Asn	Gln	Ser
1				5					10					15	
Gln	Leu	Phe	Pro	Gln	Asn	Ala	Thr	Ala	Cys	Asp	Asn	Ala	Pro	Glu	Ala
			20					25					30		
Trp	Asp	Leu	Leu	His	Arg	Val	Leu	Pro	Thr	Phe	Ile	Ile	Ser	Ile	Cys
		35					40					45			
Phe	Phe	Gly	Leu	Leu	Gly	Asn	Leu	Phe	Val	Leu	Leu	Val	Phe	Leu	Leu
		50				55					60				
Pro	Arg	Arg	Gln	Leu	Asn	Val	Ala	Glu	Ile	Tyr	Leu	Ala	Asn	Leu	Ala
		65			70					75					80
Ala	Ser	Asp	Leu	Val	Phe	Val	Leu	Gly	Leu	Pro	Phe	Trp	Ala	Glu	Asn
				85					90					95	
Ile	Trp	Asn	Gln	Phe	Asn	Trp	Pro	Phe	Gly	Ala	Leu	Leu	Cys	Arg	Val
		100						105					110		
Ile	Asn	Gly	Val	Ile	Lys	Ala	Asn	Leu	Phe	Ile	Ser	Ile	Phe	Leu	Val
		115					120					125			
Val	Ala	Ile	Ser	Gln	Asp	Arg	Tyr	Arg	Val	Leu	Val	His	Pro	Met	Ala
		130				135					140				
Ser	Arg	Arg	Gln	Gln	Arg	Arg	Arg	Gln	Ala	Arg	Val	Thr	Cys	Val	Leu
		145			150				155						160
Ile	Trp	Val	Val	Gly	Gly	Leu	Leu	Ser	Ile	Pro	Thr	Phe	Leu	Leu	Arg
				165					170					175	

Ser Ile Gln Ala Val Pro Asp Leu Asn Ile Thr Ala Cys Ile Leu Leu
180 185 190

Leu Pro His Glu Ala Trp His Phe Ala Arg Ile Val Glu Leu Asn Ile
195 200 205

Leu Gly Phe Leu Leu Pro Leu Ala Ala Ile Val Phe Phe Asn Tyr His
210 215 220

Ile Leu Ala Ser Leu Arg Thr Arg Glu Glu Val Ser Arg Thr Arg Cys
225 230 235 240

Gly Gly Arg Lys Asp Ser Lys Thr Lys Ala Leu Ile Leu Thr Leu Val
245 250 255

Val Ala Phe Leu Val Cys Trp Ala Pro Tyr His Phe Phe Ala Phe Leu
260 265 270

Glu Phe Leu Phe Gln Val Gln Ala Val Arg Gly Cys Phe Trp Glu Asp
275 280 285

Phe Ile Asp Leu Gly Leu Gln Leu Ala Asn Phe Phe Ala Phe Thr Asn
290 295 300

Ser Ser Leu Asn Pro Val Ile Tyr Val Phe Val Gly Arg Leu Phe Arg
305 310 315 320

Thr Lys Val Trp Glu Leu Tyr Lys Gln Cys Thr Pro Lys Ser Leu Ala
325 330 335

Pro Ile Ser Ser Ser His Arg Lys Glu Ile Phe Gln Leu Phe Trp Arg
340 345 350

Asn

<210> 462
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 462
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acggcctctt tcagcgccga catgctcaat gtcaccttgc aagggcccac tcttaacggg 120
acctttgccc agagcaaag cccccaagt gagtggtggt gctgggtcaa caccatccag 180
cccccttcc tctgggtgct gttcgtgctg gccaccctag agaacatctt tgtcctcagc 240
gtcttctgcc tgcacaagag cagctgcacg gtggcagaga tctacctggg gaacctggcc 300
gcagcagacc tgatcctggc ctgcgggctg cccttctggg ccatcaccat ctccaacaac 360
ttcgactggc tctttgggga gacgctctgc cgcgtggtga atgccattat ctccatgaac 420
ctgtacagca gcatctgttt cctgatgctg gtgagcatcg accgctacct ggccctgggtg 480
aaaaccatgt ccatgggccc gatgcgcggc gtgcgctggg ccaagctcta cagcttggtg 540
atctgggggt gtacgtgct cctgagctca cccatgctgg tgttcggac catgaaggag 600
tacagcgatg agggccacaa cgtcaccgct tgtgtcatca gctaccatc cctcatctgg 660
gaagtgttca ccaacatgct cctgaatgtc gtgggcttcc tgctgccctt gagtgtcatc 720
accttctgca cgatgcagat catgcagggt ctgcggaaca acgagatgca gaagttcaag 780

gagatccaga cggagaggag ggccaaggtg ctagtcttgg ttgtgctgct gctattcatc 840
atctgctggc tgcccttcca gatcagcacc ttcttgata cgctgcatcg cctcggcatc 900
ctctccagct gccaggacga gcgcatcatc gatgtaatca cacagatcgc ctccttcatg 960
gcctacagca acagctgcct caaccactg gtgtacgtga tcgtgggcaa gcgcttccga 1020
aagaagtctt gggaggtgta ccagggagtg tgccagaaag ggggctgcag gtcagaacct 1080
attcagatgg agaactccat gggcacactg cggacctcca tctccgtgga acgcagatt 1140
cacaaactgc aggactgggc agggagcaga cagtga 1176

<210> 463
<211> 391
<212> PRT
<213> Homo sapiens

<400> 463
Met Phe Ser Pro Trp Lys Ile Ser Met Phe Leu Ser Val Arg Glu Asp
1 5 10 15
Ser Val Pro Thr Thr Ala Ser Phe Ser Ala Asp Met Leu Asn Val Thr
20 25 30
Leu Gln Gly Pro Thr Leu Asn Gly Thr Phe Ala Gln Ser Lys Cys Pro
35 40 45
Gln Val Glu Trp Leu Gly Trp Leu Asn Thr Ile Gln Pro Pro Phe Leu
50 55 60
Trp Val Leu Phe Val Leu Ala Thr Leu Glu Asn Ile Phe Val Leu Ser
65 70 75 80
Val Phe Cys Leu His Lys Ser Ser Cys Thr Val Ala Glu Ile Tyr Leu
85 90 95
Gly Asn Leu Ala Ala Ala Asp Leu Ile Leu Ala Cys Gly Leu Pro Phe
100 105 110
Trp Ala Ile Thr Ile Ser Asn Asn Phe Asp Trp Leu Phe Gly Glu Thr
115 120 125
Leu Cys Arg Val Val Asn Ala Ile Ile Ser Met Asn Leu Tyr Ser Ser
130 135 140
Ile Cys Phe Leu Met Leu Val Ser Ile Asp Arg Tyr Leu Ala Leu Val
145 150 155 160
Lys Thr Met Ser Met Gly Arg Met Arg Gly Val Arg Trp Ala Lys Leu
165 170 175
Tyr Ser Leu Val Ile Trp Gly Cys Thr Leu Leu Leu Ser Ser Pro Met
180 185 190
Leu Val Phe Arg Thr Met Lys Glu Tyr Ser Asp Glu Gly His Asn Val
195 200 205
Thr Ala Cys Val Ile Ser Tyr Pro Ser Leu Ile Trp Glu Val Phe Thr
210 215 220

Asn Met Leu Leu Asn Val Val Gly Phe Leu Leu Pro Leu Ser Val Ile
 225 230 235 240
 Thr Phe Cys Thr Met Gln Ile Met Gln Val Leu Arg Asn Asn Glu Met
 245 250 255
 Gln Lys Phe Lys Glu Ile Gln Thr Glu Arg Arg Ala Lys Val Leu Val
 260 265 270
 Leu Val Val Leu Leu Leu Phe Ile Ile Cys Trp Leu Pro Phe Gln Ile
 275 280 285
 Ser Thr Phe Leu Asp Thr Leu His Arg Leu Gly Ile Leu Ser Ser Cys
 290 295 300
 Gln Asp Glu Arg Ile Ile Asp Val Ile Thr Gln Ile Ala Ser Phe Met
 305 310 315 320
 Ala Tyr Ser Asn Ser Cys Leu Asn Pro Leu Val Tyr Val Ile Val Gly
 325 330 335
 Lys Arg Phe Arg Lys Lys Ser Trp Glu Val Tyr Gln Gly Val Cys Gln
 340 345 350
 Lys Gly Gly Cys Arg Ser Glu Pro Ile Gln Met Glu Asn Ser Met Gly
 355 360 365
 Thr Leu Arg Thr Ser Ile Ser Val Glu Arg Gln Ile His Lys Leu Gln
 370 375 380
 Asp Trp Ala Gly Ser Arg Gln
 385 390

<210> 464
 <211> 1449
 <212> DNA
 <213> Homo sapiens

<400> 464
 atggcgtctt tctctgctga gaccaattca actgacctac tctcacagcc atggaatgag 60
 cccccagtaa ttctctccat ggtcattctc agccttactt ttttactggg attgccaggc 120
 aatgggctgg tgctgtgggt ggctggcctg aagatgcagc ggacagtga cacaatttgg 180
 ttctctcacc tcaccttggc ggacctctc tgctgcctct ccttgccctt ctgctggct 240
 cacttggctc tccagggaca gtggccctac ggcaggttcc tatgcaagct catcccctcc 300
 atcattgtcc tcaacatgtt tgccagtgtc ttctgtctta ctgccattag cctggatcgc 360
 tgtcttgtgg tattcaagcc aatctggtgt cagaatcatc gcaatgtagg gatggcctgc 420
 tctatctgtg gatgtatctg ggtggtggct tgtgtgatgt gcattcctgt gttcgtgtac 480
 cgggaaatct tctactacaga caaccataat agatgtggct acaaatttgg tctctccagc 540
 tcattagatt atccagactt ttatggagat ccactagaaa acaggtctct tgaaaacatt 600
 gttcagccgc ctggagaaat gaatgatagg ttagatcctt cctctttcca aacaaatgat 660
 catccttga cagtcccccac tgtcttccaa cctcaaacat ttcaaagacc ttctgcagat 720
 tcactcccta ggggttctgc taggttaaca agtcaaaatc tgtattctaa tgtattttaa 780
 cctgctgatg tgggtctcacc taaaatcccc agtgggtttc ctattgaaga tcacgaaacc 840
 agcccactgg ataactctga tgcctttctc tctactcatt taaagctgtt ccctagcgct 900
 tctagcaatt ccttctacga gtctgagcta ccacaagggt tccaggatta ttacaattta 960
 ggccaattca cagatgacga tcaagtgcc acaccctcg tggcaataac gatcactagg 1020

ctagtgggtgg gtttctctgct gccctctgtt atcatgatag cctggttacag cttcattgtc 1080
 ttccgaatgc aaaggggccc cttcgccaag tctcagagca aaaccaagcg agtggccgtg 1140
 gtgggtgggtg ctgtctttct tgtctgctgg actccatacc acatttttgg agtcctgtca 1200
 ttgcttactg acccagaaac tcccttgggg aaaactctga tgtcctggga tcatgtatgc 1260
 attgctctag catctgcca tagttgcttt aatcccttcc tttatgccct cttggggaaa 1320
 gatttttagga agaaagcaag gcagtcatt cagggaattc tggaggcagc cttcagtgcg 1380
 gagctcacac gttccacca ctgtccctca aacaatgtca tttcagaaag aaatagtaca 1440
 actgtgtga 1449

<210> 465
 <211> 482
 <212> PRT
 <213> Homo sapiens

<400> 465
 Met Ala Ser Phe Ser Ala Glu Thr Asn Ser Thr Asp Leu Leu Ser Gln
 1 5 10 15
 Pro Trp Asn Glu Pro Pro Val Ile Leu Ser Met Val Ile Leu Ser Leu
 20 25 30
 Thr Phe Leu Leu Gly Leu Pro Gly Asn Gly Leu Val Leu Trp Val Ala
 35 40 45
 Gly Leu Lys Met Gln Arg Thr Val Asn Thr Ile Trp Phe Leu His Leu
 50 55 60
 Thr Leu Ala Asp Leu Leu Cys Cys Leu Ser Leu Pro Phe Ser Leu Ala
 65 70 75 80
 His Leu Ala Leu Gln Gly Gln Trp Pro Tyr Gly Arg Phe Leu Cys Lys
 85 90 95
 Leu Ile Pro Ser Ile Ile Val Leu Asn Met Phe Ala Ser Val Phe Leu
 100 105 110
 Leu Thr Ala Ile Ser Leu Asp Arg Cys Leu Val Val Phe Lys Pro Ile
 115 120 125
 Trp Cys Gln Asn His Arg Asn Val Gly Met Ala Cys Ser Ile Cys Gly
 130 135 140
 Cys Ile Trp Val Val Ala Cys Val Met Cys Ile Pro Val Phe Val Tyr
 145 150 155 160
 Arg Glu Ile Phe Thr Thr Asp Asn His Asn Arg Cys Gly Tyr Lys Phe
 165 170 175
 Gly Leu Ser Ser Ser Leu Asp Tyr Pro Asp Phe Tyr Gly Asp Pro Leu
 180 185 190
 Glu Asn Arg Ser Leu Glu Asn Ile Val Gln Pro Pro Gly Glu Met Asn
 195 200 205
 Asp Arg Leu Asp Pro Ser Ser Phe Gln Thr Asn Asp His Pro Trp Thr
 210 215 220

Val	Pro	Thr	Val	Phe	Gln	Pro	Gln	Thr	Phe	Gln	Arg	Pro	Ser	Ala	Asp
225					230					235					240
Ser	Leu	Pro	Arg	Gly	Ser	Ala	Arg	Leu	Thr	Ser	Gln	Asn	Leu	Tyr	Ser
				245					250					255	
Asn	Val	Phe	Lys	Pro	Ala	Asp	Val	Val	Ser	Pro	Lys	Ile	Pro	Ser	Gly
			260					265					270		
Phe	Pro	Ile	Glu	Asp	His	Glu	Thr	Ser	Pro	Leu	Asp	Asn	Ser	Asp	Ala
		275					280					285			
Phe	Leu	Ser	Thr	His	Leu	Lys	Leu	Phe	Pro	Ser	Ala	Ser	Ser	Asn	Ser
	290					295					300				
Phe	Tyr	Glu	Ser	Glu	Leu	Pro	Gln	Gly	Phe	Gln	Asp	Tyr	Tyr	Asn	Leu
305					310					315					320
Gly	Gln	Phe	Thr	Asp	Asp	Asp	Gln	Val	Pro	Thr	Pro	Leu	Val	Ala	Ile
				325					330					335	
Thr	Ile	Thr	Arg	Leu	Val	Val	Gly	Phe	Leu	Leu	Pro	Ser	Val	Ile	Met
			340					345					350		
Ile	Ala	Cys	Tyr	Ser	Phe	Ile	Val	Phe	Arg	Met	Gln	Arg	Gly	Arg	Phe
		355					360					365			
Ala	Lys	Ser	Gln	Ser	Lys	Thr	Lys	Arg	Val	Ala	Val	Val	Val	Val	Ala
	370					375					380				
Val	Phe	Leu	Val	Cys	Trp	Thr	Pro	Tyr	His	Ile	Phe	Gly	Val	Leu	Ser
385					390					395					400
Leu	Leu	Thr	Asp	Pro	Glu	Thr	Pro	Leu	Gly	Lys	Thr	Leu	Met	Ser	Trp
				405					410					415	
Asp	His	Val	Cys	Ile	Ala	Leu	Ala	Ser	Ala	Asn	Ser	Cys	Phe	Asn	Pro
			420					425					430		
Phe	Leu	Tyr	Ala	Leu	Leu	Gly	Lys	Asp	Phe	Arg	Lys	Lys	Ala	Arg	Gln
		435					440					445			
Ser	Ile	Gln	Gly	Ile	Leu	Glu	Ala	Ala	Phe	Ser	Glu	Glu	Leu	Thr	Arg
	450					455					460				
Ser	Thr	His	Cys	Pro	Ser	Asn	Asn	Val	Ile	Ser	Glu	Arg	Asn	Ser	Thr
465					470					475					480
Thr	Val														

<210> 466
 <211> 1053
 <212> DNA
 <213> Homo sapiens

```

<400> 466
atgaactcct tcaattatac caccctgat tatgggcact atgatgacaa ggataccctg 60
gacctcaaca cccctgtgga taaaacttct aacacgctgc gtgttcaga catcctggcc 120
ttggatcatc ttgcagtcgt ctctcctggtg ggagtgcctg gcaatgccct ggtggtctgg 180
gtgacggcat tcgaggccaa gcggaccatc aatgccatct gggtcctcaa cttggcggtg 240
gccgacttcc tctcctgcct ggcgctgccc atcttgttca cgtccattgt acagcatcac 300
cactggccct ttggcggggc cgctgcagc atcctgcctt cctcatcct gctcaacatg 360
tacgccagca tctgtctcct ggccaccatc agcgccgacc gctttctgct ggtgtttaaa 420
cccatctggt gccagaactt ccgagggggc ggcttggcct ggatcgctg tgcctgggt 480
tggtgttttag cctgtctgct gaccataccc tcttctctgt accgggtggt ccgggaggag 540
tactttccac caaaggtgtt gtgtggcgtg gactacagcc acgacaaacg gcgggagcga 600
gccgtggcca tcgtccggct ggtcctgggc ttctctgtggc ctctactcac gctcacgatt 660
tgttacactt tcatcctgct ccggacgtgg agcgcgagg ccacgcggtc caccaagaca 720
aagaaggtgg tgggtggcagt ggtggccagt ttctttatct tctggttgcc ctaccagggtg 780
acggggataa tgatgtcctt cctggagcca tcgtcaccca cttcctgct gctgaataag 840
ctggactccc tgtgtgtctc ctttgctac atcaactgct gcatcaacc catcatctac 900
gtggtggcgc gccagggcct ccagggccga ctgcggaaat cctccccag cctcctccgg 960
aacgtgttga ctgaagagtc cgtggttagg gagagcaagt cattcacgcg ctccacagt 1020
gacactatgg cccagaagac ccaggcagt tag 1053

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<210> 467
<211> 350
<212> PRT
<213> Homo sapiens

```

```

<400> 467
Met Asn Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
  1             5             10             15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr
      20             25             30

Leu Arg Val Pro Asp Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe
      35             40             45

Leu Val Gly Val Leu Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
      50             55             60

Glu Ala Lys Arg Thr Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
      65             70             75             80

Ala Asp Phe Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile
      85             90             95

Val Gln His His His Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu
      100            105            110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
      115            120            125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys
      130            135            140

Gln Asn Phe Arg Gly Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala
      145            150            155            160

```

Trp Gly Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Val
 165 170 175
 Val Arg Glu Glu Tyr Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr
 180 185 190
 Ser His Asp Lys Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
 195 200 205
 Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe
 210 215 220
 Ile Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
 225 230 235 240
 Lys Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu
 245 250 255
 Pro Tyr Gln Val Thr Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser
 260 265 270
 Pro Thr Phe Leu Leu Leu Asn Lys Leu Asp Ser Leu Cys Val Ser Phe
 275 280 285
 Ala Tyr Ile Asn Cys Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly
 290 295 300
 Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
 305 310 315 320
 Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
 325 330 335
 Arg Ser Thr Val Asp Thr Met Ala Gln Lys Thr Gln Ala Val
 340 345 350

<210> 468
 <211> 1419
 <212> DNA
 <213> Homo sapiens

<400> 468
 atgaagtcga tcctagatgg ccttgcagat accaccttcc gcaccatcac cactgacctc 60
 ctgtacgtgg gctcaaata cattcagtag gaagacatca aaggtgacat ggcattccaaa 120
 ttagggtagt tcccacagaa attcccttta acttccttta ggggaagtcc cttccaagag 180
 aagatgactg cgggagacaa cccccagcta gtcccagcag accaggtgaa cattacagaa 240
 ttttacaaca agtctctctc gtccttcaag gagaatgagg agaactacca gtgtggggag 300
 aacttcatgg acatagagtg tttcatgggc ctgaacccca gccagcagct ggccattgca 360
 gtccctgtccc tcacgctggg caccttcacg gtccctggaga acctcctggg gctgtgcgtc 420
 atcctccact cccgcagcct ccgctgcagg ccttcctacc acttcatcgg cagcctggcg 480
 gtggcagacc tcctggggag tgtcattttt gtctacagct tcattgactt ccacgtgttc 540
 caccgcaaag atagccgcaa cgtgtttctg ttcaaactgg gtgggggtcac ggcctccttc 600
 actgcctcgg tgggcagcct gttcctcaca gccatcgaca ggtacatatc cattcacagg 660
 cccctggcct ataagaggat tgtcaccagg cccaaggcgg tggtagcggt ttgcctgatg 720
 tggaccatag ccattgtgat cgccgtgctg cctctcctgg gctggaactg cgagaaactg 780


```

caatctgttt gctcagacat tttccacac attgatgaaa cctacctgat gttctggatc 840
ggggtcacca gcgtactgct tctgttcac gtgtatgctg acatgtatat tctctggaag 900
gctcacagcc acgccgtccg catgattcag cgtggcaccc agaagagcat catcatccac 960
acgtctgagg atgggaaggt acaggtgacc cggccagacc aagcccgcgcat ggacattagg 1020
ttaaagaaga ccctggtcct gatcctgggtg gtgttgatca tctgctgggg ccctctgctt 1080
gcaatcatgg tgtatgatgt ctttggaag atgaacaagc tcattaagac ggtgtttgca 1140
ttctgcagta tgctctgcct gctgaactcc accgtgaacc ccatcatcta tgctctgagg 1200
agtaaggacc tgcgacacgc tttccggagc atgtttccct cttgtgaagg cactgcgcag 1260
cctctggata acagcatggg ggactcggac tgctgcaca aacacgcaaa caatgcagcc 1320
agtgttcaca gggccgcaga aagctgcac aagagcacgg tcaagattgc caaggtaacc 1380
atgtctgtgt ccacagacac gtctgccgag gctctgtga 1419

```

<210> 469
 <211> 472
 <212> PRT
 <213> Homo sapiens

<400> 469

```

Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
  1             5             10             15

```

```

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
      20             25             30

```

```

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
      35             40             45

```

```

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
      50             55             60

```

```

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
      65             70             75             80

```

```

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
      85             90             95

```

```

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
      100            105            110

```

```

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
      115            120            125

```

```

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
      130            135            140

```

```

Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
      145            150            155            160

```

```

Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
      165            170            175

```

```

Phe His Val Phe His Arg Lys Asp Ser Arg Asn Val Phe Leu Phe Lys
      180            185            190

```

```

Leu Gly Gly Val Thr Ala Ser Phe Thr Ala Ser Val Gly Ser Leu Phe
      195            200            205

```


<400> 470

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atggaggaat gctgggtgac agagatagcc aatgggtcca aggatggctt ggattccaac 60
cctatgaagg attacatgat cctgagtggg cccagaaga cagctgttgc tgtgttgtgc 120
actcttctgg gcctgctaag tgccctggag aacgtggctg tgctctatct gatcctgtcc 180
tcccaccaac tccgccgga gccctcatal ctgttcattg gcagcttggc tggggctgac 240
ttcctggcca gtgtggtctt tgcattgacg tttgtgaatt tccatgtttt ccatgggtgtg 300
gattccaagg ctgtcttcct gctgaagatt ggcagcgtga ctatgacctt cacagcctct 360
gtgggtagcc tcctgctgac cgccattgac cgatacctct gcctgcgcta tccaccttcc 420
tacaaagctc tgctcaccgc tggaggggca ctgggtgacct tgggcatcat gtgggtcctc 480
tcagcactag tctcctacct gccctcatg ggatggactt gctgtcccag gccctgctct 540
gagcttttcc cactgatccc caatgactac ctgctgagct ggctcctgtt catcgccttc 600
ctcttttccg gaatcatcta cacctatggg catgttctct ggaaggccca tcagcatgtg 660
gccagcttgt ctggccacca ggacaggcag gtgccaggaa tggcccgaat gaggctggat 720
gtgaggttga agaagaccct agggctagtgt ttggctgtgc tcctcatctg ttggttccca 780
gtgctggccc tcattggccc cagcctggcc actacgctca gtgaccaggt caagaaggcc 840
tttgctttct gctccatgct gtgcctcatc aactccatgg tcaaccctgt catctatgct 900
ctacggagtgt gagagatccg ctctctctgcc catcactgcc tggctcactg gaagaagtgt 960
gtgagggggc ttgggtcaga ggcaaaagaa gaagcccga gatcctcagt caccgagaca 1020
gaggctgatg ggaaaatcac tccgtggcca gattccagag atctagacct ctctgattgc 1080
tga

```

<210> 471

<211> 360

<212> PRT

<213> Homo sapiens

<400> 471

```

Met Glu Glu Cys Trp Val Thr Glu Ile Ala Asn Gly Ser Lys Asp Gly
  1              5              10              15

Leu Asp Ser Asn Pro Met Lys Asp Tyr Met Ile Leu Ser Gly Pro Gln
          20              25              30

Lys Thr Ala Val Ala Val Leu Cys Thr Leu Leu Gly Leu Leu Ser Ala
          35              40              45

Leu Glu Asn Val Ala Val Leu Tyr Leu Ile Leu Ser Ser His Gln Leu
          50              55              60

Arg Arg Lys Pro Ser Tyr Leu Phe Ile Gly Ser Leu Ala Gly Ala Asp
          65              70              75              80

Phe Leu Ala Ser Val Val Phe Ala Cys Ser Phe Val Asn Phe His Val
          85              90              95

Phe His Gly Val Asp Ser Lys Ala Val Phe Leu Leu Lys Ile Gly Ser
          100              105              110

Val Thr Met Thr Phe Thr Ala Ser Val Gly Ser Leu Leu Leu Thr Ala
          115              120              125

Ile Asp Arg Tyr Leu Cys Leu Arg Tyr Pro Pro Ser Tyr Lys Ala Leu
          130              135              140

Leu Thr Arg Gly Arg Ala Leu Val Thr Leu Gly Ile Met Trp Val Leu

```

0982509-040501-105040-0982509

145		150		155		160
Ser Ala Leu Val	Ser Tyr Leu Pro Leu Met Gly Trp Thr Cys Cys Pro					
	165			170		175
Arg Pro Cys Ser Glu Leu Phe Pro Leu Ile Pro Asn Asp Tyr Leu Leu						
	180			185		190
Ser Trp Leu Leu Phe Ile Ala Phe Leu Phe Ser Gly Ile Ile Tyr Thr						
	195			200		205
Tyr Gly His Val Leu Trp Lys Ala His Gln His Val Ala Ser Leu Ser						
	210			215		220
Gly His Gln Asp Arg Gln Val Pro Gly Met Ala Arg Met Arg Leu Asp						
	225			230		235
Val Arg Leu Lys Lys Thr Leu Gly Leu Val Leu Ala Val Leu Leu Ile						
	245			250		255
Cys Trp Phe Pro Val Leu Ala Leu Met Ala His Ser Leu Ala Thr Thr						
	260			265		270
Leu Ser Asp Gln Val Lys Lys Ala Phe Ala Phe Cys Ser Met Leu Cys						
	275			280		285
Leu Ile Asn Ser Met Val Asn Pro Val Ile Tyr Ala Leu Arg Ser Gly						
	290			295		300
Glu Ile Arg Ser Ser Ala His His Cys Leu Ala His Trp Lys Lys Cys						
	305			310		315
Val Arg Gly Leu Gly Ser Glu Ala Lys Glu Glu Ala Pro Arg Ser Ser						
	325			330		335
Val Thr Glu Thr Glu Ala Asp Gly Lys Ile Thr Pro Trp Pro Asp Ser						
	340			345		350
Arg Asp Leu Asp Leu Ser Asp Cys						
	355			360		

<210> 472
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 472
 atgctgtcca catctcgttc tcggtttatc agaaatacca acgagagcgg tgaagaagtc 60
 accacctttt ttgattatga ttacgggtgct cctgtcata aatttgacgt gaagcaaatt 120
 ggggcccaac tcttgccctcc gctctactcg ctgggtgttca tctttgggtt tgtgggcaac 180
 atgctggtcg tctctatctt aataaaactgc aaaaagctga agtgcttgac tgacatttac 240
 ctgctcaacc tggccatctc tgatctgctt tttcttatta ctctccatt gtgggctcac 300
 tctgctgcaa atgagtgggt ctttgggaat gcaatgtgca aattattcac agggctgtat 360
 cacatcggtt attttggcgg aatcttcttc atcatcctcc tgacaatcga tagatacctg 420
 gctattgtcc atgctgtgtt tgccttataaa gccaggacgg tcacctttgg ggtggtgaca 480
 agtgtgatca cctggttggg ggctgtgttt gcttctgtcc caggaatcat ctttactaaa 540

tgccagaaag aagattctgt ttatgtctgt ggccttatt ttccacgagg atggaataat 600
 ttccacacaa taatgaggaa ctttttggg ctggtctgc cgctgctcat catggctc 660
 tgctactcgg gaatcctgaa aaccctgctt cgggtgcgaa acgagaagaa gaggcatagg 720
 gcaaagagag tcattcttcac catcatgatt gtttactttc tcttctggac tccctataac 780
 attgtcattc tcctgaacac cttccaggaa ttcttcggcc tgagtaactg tgaaagcacc 840
 agtcaactgg accaagccac gcagggtgaca gagactcttg ggatgactca ctgctgcac 900
 aatcccatca tctatgcctt cggtggggag aagttcagaa ggtatctctc ggtgttcttc 960
 cgaaagcaca tcaccaagcg cttctgcaaa caatgtccag ttttctacag ggagacagt 1020
 gatggagtga cttcaacaaa cagccttcc actggggagc aggaagtctc ggctggttta 1080
 taa 1083

<210> 473
 <211> 360
 <212> PRT
 <213> Homo sapiens

<400> 473
 Met Leu Ser Thr Ser Arg Ser Arg Phe Ile Arg Asn Thr Asn Glu Ser
 1 5 10 15
 Gly Glu Glu Val Thr Thr Phe Phe Asp Tyr Asp Tyr Gly Ala Pro Cys
 20 25 30
 His Lys Phe Asp Val Lys Gln Ile Gly Ala Gln Leu Leu Pro Pro Leu
 35 40 45
 Tyr Ser Leu Val Phe Ile Phe Gly Phe Val Gly Asn Met Leu Val Val
 50 55 60
 Leu Ile Leu Ile Asn Cys Lys Lys Leu Lys Cys Leu Thr Asp Ile Tyr
 65 70 75 80
 Leu Leu Asn Leu Ala Ile Ser Asp Leu Leu Phe Leu Ile Thr Leu Pro
 85 90 95
 Leu Trp Ala His Ser Ala Ala Asn Glu Trp Val Phe Gly Asn Ala Met
 100 105 110
 Cys Lys Leu Phe Thr Gly Leu Tyr His Ile Gly Tyr Phe Gly Gly Ile
 115 120 125
 Phe Phe Ile Ile Leu Leu Thr Ile Asp Arg Tyr Leu Ala Ile Val His
 130 135 140
 Ala Val Phe Ala Leu Lys Ala Arg Thr Val Thr Phe Gly Val Val Thr
 145 150 155 160
 Ser Val Ile Thr Trp Leu Val Ala Val Phe Ala Ser Val Pro Gly Ile
 165 170 175
 Ile Phe Thr Lys Cys Gln Lys Glu Asp Ser Val Tyr Val Cys Gly Pro
 180 185 190
 Tyr Phe Pro Arg Gly Trp Asn Asn Phe His Thr Ile Met Arg Asn Ile
 195 200 205

<210> 475
 <211> 355
 <212> PRT
 <213> Homo sapiens

<400> 475

Met	Thr	Thr	Ser	Leu	Asp	Thr	Val	Glu	Thr	Phe	Gly	Thr	Thr	Ser	Tyr	1	5	10	15
Tyr	Asp	Asp	Val	Gly	Leu	Leu	Cys	Glu	Lys	Ala	Asp	Thr	Arg	Ala	Leu	20	25	30	
Met	Ala	Gln	Phe	Val	Pro	Pro	Leu	Tyr	Ser	Leu	Val	Phe	Thr	Val	Gly	35	40	45	
Leu	Leu	Gly	Asn	Val	Val	Val	Val	Met	Ile	Leu	Ile	Lys	Tyr	Arg	Arg	50	55	60	
Leu	Arg	Ile	Met	Thr	Asn	Ile	Tyr	Leu	Leu	Asn	Leu	Ala	Ile	Ser	Asp	65	70	75	80
Leu	Leu	Phe	Leu	Val	Thr	Leu	Pro	Phe	Trp	Ile	His	Tyr	Val	Arg	Gly	85	90	95	
His	Asn	Trp	Val	Phe	Gly	His	Gly	Met	Cys	Lys	Leu	Leu	Ser	Gly	Phe	100	105	110	
Tyr	His	Thr	Gly	Leu	Tyr	Ser	Glu	Ile	Phe	Phe	Ile	Ile	Leu	Leu	Thr	115	120	125	
Ile	Asp	Arg	Tyr	Leu	Ala	Ile	Val	His	Ala	Val	Phe	Ala	Leu	Arg	Ala	130	135	140	
Arg	Thr	Val	Thr	Phe	Gly	Val	Ile	Thr	Ser	Ile	Val	Thr	Trp	Gly	Leu	145	150	155	160
Ala	Val	Leu	Ala	Ala	Leu	Pro	Glu	Phe	Ile	Phe	Tyr	Glu	Thr	Glu	Glu	165	170	175	
Leu	Phe	Glu	Glu	Thr	Leu	Cys	Ser	Ala	Leu	Tyr	Pro	Glu	Asp	Thr	Val	180	185	190	
Tyr	Ser	Trp	Arg	His	Phe	His	Thr	Leu	Arg	Met	Thr	Ile	Phe	Cys	Leu	195	200	205	
Val	Leu	Pro	Leu	Leu	Val	Met	Ala	Ile	Cys	Tyr	Thr	Gly	Ile	Ile	Lys	210	215	220	
Thr	Leu	Leu	Arg	Cys	Pro	Ser	Lys	Lys	Lys	Tyr	Lys	Ala	Lys	Arg	Leu	225	230	235	240
Ile	Phe	Val	Ile	Met	Ala	Val	Phe	Phe	Ile	Phe	Trp	Thr	Pro	Tyr	Asn	245	250	255	
Val	Ala	Ile	Leu	Leu	Ser	Ser	Tyr	Gln	Ser	Ile	Leu	Phe	Gly	Asn	Asp	260	265	270	

Cys Glu Arg Ser Lys His Leu Asp Leu Val Met Leu Val Thr Glu Val
275 280 285

Ile Ala Tyr Ser His Cys Cys Met Asn Pro Val Ile Tyr Ala Phe Val
290 295 300

Gly Glu Arg Phe Arg Lys Tyr Leu Arg His Phe Phe His Arg His Leu
305 310 315 320

Leu Met His Leu Gly Arg Tyr Ile Pro Phe Leu Pro Ser Glu Lys Leu
325 330 335

Glu Arg Thr Ser Ser Val Ser Pro Ser Thr Ala Glu Pro Glu Leu Ser
340 345 350

Ile Val Phe
355

<210> 476
<211> 1059
<212> DNA
<213> Homo sapiens

<400> 476
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tgtcaactct tgacagggtct ctattttata ggcttcttct ctggaatctt cttcatcatc 360
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acggtcacct ttgggtggtg gacaagtgtg atcaactggg tgggtggctgt gtttgctgtc 480
ctcccaggaa tcatctttac cagatctcaa aaagaaggtc ttcattacac ctgcagctct 540
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<210> 477
<211> 352
<212> PRT
<213> Homo sapiens

<400> 477
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Ser Glu Pro Cys Gln Lys Ile Asn Val Lys Gln Ile Ala Ala Arg Leu
20 25 30

Leu	Pro	Pro	Leu	Tyr	Ser	Leu	Val	Phe	Ile	Phe	Gly	Phe	Val	Gly	Asn
		35					40					45			
Met	Leu	Val	Ile	Leu	Ile	Leu	Ile	Asn	Cys	Lys	Arg	Leu	Lys	Ser	Met
	50					55					60				
Thr	Asp	Ile	Tyr	Leu	Leu	Asn	Leu	Ala	Ile	Ser	Asp	Leu	Phe	Phe	Leu
65					70					75					80
Leu	Thr	Val	Pro	Phe	Trp	Ala	His	Tyr	Ala	Ala	Ala	Gln	Trp	Asp	Phe
				85					90					95	
Gly	Asn	Thr	Met	Cys	Gln	Leu	Leu	Thr	Gly	Leu	Tyr	Phe	Ile	Gly	Phe
			100					105					110		
Phe	Ser	Gly	Ile	Phe	Phe	Ile	Ile	Leu	Leu	Thr	Ile	Asp	Arg	Tyr	Leu
		115					120					125			
Ala	Val	Val	His	Ala	Val	Phe	Ala	Leu	Lys	Ala	Arg	Thr	Val	Thr	Phe
	130					135					140				
Gly	Val	Val	Thr	Ser	Val	Ile	Thr	Trp	Val	Val	Ala	Val	Phe	Ala	Ser
145					150					155					160
Leu	Pro	Gly	Ile	Ile	Phe	Thr	Arg	Ser	Gln	Lys	Glu	Gly	Leu	His	Tyr
				165					170					175	
Thr	Cys	Ser	Ser	His	Phe	Pro	Tyr	Ser	Gln	Tyr	Gln	Phe	Trp	Lys	Asn
			180					185					190		
Phe	Gln	Thr	Leu	Lys	Ile	Val	Ile	Leu	Gly	Leu	Val	Leu	Pro	Leu	Leu
		195					200					205			
Val	Met	Val	Ile	Cys	Tyr	Ser	Gly	Ile	Leu	Lys	Thr	Leu	Leu	Arg	Cys
	210					215					220				
Arg	Asn	Glu	Lys	Lys	Arg	His	Arg	Ala	Lys	Arg	Leu	Ile	Phe	Thr	Ile
225					230					235					240
Met	Ile	Val	Tyr	Phe	Leu	Phe	Trp	Ala	Pro	Tyr	Asn	Ile	Val	Leu	Leu
				245					250					255	
Leu	Asn	Thr	Phe	Gln	Glu	Phe	Phe	Gly	Leu	Asn	Asn	Cys	Ser	Ser	Ser
			260					265					270		
Asn	Arg	Leu	Asp	Gln	Ala	Met	Gln	Val	Thr	Glu	Thr	Leu	Gly	Met	Thr
		275					280					285			
His	Cys	Cys	Ile	Asn	Pro	Ile	Ile	Tyr	Ala	Phe	Val	Gly	Glu	Lys	Phe
	290					295					300				
Arg	Asn	Tyr	Leu	Leu	Val	Phe	Phe	Gln	Lys	His	Ile	Ala	Lys	Arg	Phe
305					310					315					320
Cys	Lys	Cys	Cys	Ser	Ile	Phe	Gln	Gln	Glu	Ala	Pro	Glu	Arg	Ala	Ser
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Ser Val Tyr Thr Arg Ser Thr Gly Glu Gln Glu Ile Ser Val Gly Leu
 340 345 350

<210> 478
 <211> 1068
 <212> DNA
 <213> Homo sapiens

<400> 478
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 ttttattgcc tcctgtttgt attcagtcct ctgggaaaca gcctggcat cctggcctt 180
 gtggtctgca agaagctgag gagcatcaca gatgtatacc tcttgaacct ggccctgtct 240
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 tttgggactg taatgtgcaa agtgggtgtct ggcttttatt acattggctt ctacagcagc 360
 atgtttttca tcaccctcat gagtgtggac aggtacctgg ctgttgtcca tgccgtgtat 420
 gccctaaagg tgaggacgat caggatgggc acaacgctgt gcctggcagt atggctaacc 480
 gccattatgg ctaccatccc attgctagtg ttttaccagg tggcctctga agatgggtgt 540
 ctacagtgtt attcatttta caatcaacag actttgaagt ggaagatctt caccaacttc 600
 aaaatgaaca ttttaggctt gttgatccca ttcaccatct ttatgttctg ctacattaaa 660
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 ctcatgtggt tcattgcata tttacttttc tgggtcccat tcaacgtggt tcttttctc 780
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<210> 479
 <211> 355
 <212> PRT
 <213> Homo sapiens

<400> 479
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 Asn Gly Lys Leu Leu Leu Ala Val Phe Tyr Cys Leu Leu Phe Val Phe
 35 40 45
 Ser Leu Leu Gly Asn Ser Leu Val Ile Leu Val Leu Val Val Cys Lys
 50 55 60
 Lys Leu Arg Ser Ile Thr Asp Val Tyr Leu Leu Asn Leu Ala Leu Ser
 65 70 75 80
 Asp Leu Leu Phe Val Phe Ser Phe Pro Phe Gln Thr Tyr Tyr Leu Leu
 85 90 95

Asp	Gln	Trp	Val	Phe	Gly	Thr	Val	Met	Cys	Lys	Val	Val	Ser	Gly	Phe	
			100					105					110			
Tyr	Tyr	Ile	Gly	Phe	Tyr	Ser	Ser	Met	Phe	Phe	Ile	Thr	Leu	Met	Ser	
		115					120					125				
Val	Asp	Arg	Tyr	Leu	Ala	Val	Val	His	Ala	Val	Tyr	Ala	Leu	Lys	Val	
	130					135					140					
Arg	Thr	Ile	Arg	Met	Gly	Thr	Thr	Leu	Cys	Leu	Ala	Val	Trp	Leu	Thr	
145					150					155					160	
Ala	Ile	Met	Ala	Thr	Ile	Pro	Leu	Leu	Val	Phe	Tyr	Gln	Val	Ala	Ser	
				165					170					175		
Glu	Asp	Gly	Val	Leu	Gln	Cys	Tyr	Ser	Phe	Tyr	Asn	Gln	Gln	Thr	Leu	
		180						185					190			
Lys	Trp	Lys	Ile	Phe	Thr	Asn	Phe	Lys	Met	Asn	Ile	Leu	Gly	Leu	Leu	
		195					200					205				
Ile	Pro	Phe	Thr	Ile	Phe	Met	Phe	Cys	Tyr	Ile	Lys	Ile	Leu	His	Gln	
	210					215					220					
Leu	Lys	Arg	Cys	Gln	Asn	His	Asn	Lys	Thr	Lys	Ala	Lys	Arg	Leu	Val	
225					230					235					240	
Leu	Ile	Val	Val	Ile	Ala	Ser	Leu	Leu	Phe	Trp	Val	Pro	Phe	Asn	Val	
				245					250					255		
Val	Leu	Phe	Leu	Thr	Ser	Leu	His	Ser	Met	His	Ile	Leu	Asp	Gly	Cys	
			260					265					270			
Ser	Ile	Ser	Gln	Gln	Leu	Thr	Tyr	Ala	Thr	His	Val	Thr	Glu	Ile	Ile	
		275					280					285				
Ser	Phe	Thr	His	Cys	Cys	Val	Asn	Pro	Val	Ile	Tyr	Ala	Phe	Val	Gly	
		290				295					300					
Glu	Lys	Phe	Lys	Lys	His	Leu	Ser	Glu	Ile	Phe	Gln	Lys	Ser	Cys	Ser	
305					310					315					320	
Gln	Ile	Phe	Asn	Tyr	Leu	Gly	Arg	Gln	Met	Pro	Arg	Glu	Ser	Cys	Glu	
				325					330					335		
Lys	Ser	Ser	Ser	Cys	Gln	Gln	His	Ser	Ser	Arg	Ser	Ser	Ser	Val	Asp	
			340					345					350			
Tyr	Ile	Leu														
		355														

<210> 480
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 480

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<210> 481

<211> 369

<212> PRT

<213> Homo sapiens

<400> 481

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Met Thr Pro Thr Asp Phe Thr Ser Pro Ile Pro Asn Met Ala Asp Asp
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Tyr Gly Ser Glu Ser Thr Ser Ser Met Glu Asp Tyr Val Asn Phe Asn
      20              25              30

Phe Thr Asp Phe Tyr Cys Glu Lys Asn Asn Val Arg Gln Phe Ala Ser
      35              40              45

His Phe Leu Pro Pro Leu Tyr Trp Leu Val Phe Ile Val Gly Ala Leu
      50              55              60

Gly Asn Ser Leu Val Ile Leu Val Tyr Trp Tyr Cys Thr Arg Val Lys
      65              70              75              80

Thr Met Thr Asp Met Phe Leu Leu Asn Leu Ala Ile Ala Asp Leu Leu
      85              90              95

Phe Leu Val Thr Leu Pro Phe Trp Ala Ile Ala Ala Ala Asp Gln Trp
      100              105              110

Lys Phe Gln Thr Phe Met Cys Lys Val Val Asn Ser Met Tyr Lys Met
      115              120              125

Asn Phe Tyr Ser Cys Val Leu Leu Ile Met Cys Ile Ser Val Asp Arg
      130              135              140

Tyr Ile Ala Ile Ala Gln Ala Met Arg Ala His Thr Trp Arg Glu Lys
      145              150              155              160

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Arg Leu Leu Tyr Ser Lys Met Val Cys Phe Thr Ile Trp Val Leu Ala
165 170 175

Ala Ala Leu Cys Ile Pro Glu Ile Leu Tyr Ser Gln Ile Lys Glu Glu
180 185 190

Ser Gly Ile Ala Ile Cys Thr Met Val Tyr Pro Ser Asp Glu Ser Thr
195 200 205

Lys Leu Lys Ser Ala Val Leu Thr Leu Lys Val Ile Leu Gly Phe Phe
210 215 220

Leu Pro Phe Val Val Met Ala Cys Cys Tyr Thr Ile Ile Ile His Thr
225 230 235 240

Leu Ile Gln Ala Lys Lys Ser Ser Lys His Lys Ala Lys Lys Val Thr
245 250 255

Ile Thr Val Leu Thr Val Phe Val Leu Ser Gln Phe Pro Tyr Asn Cys
260 265 270

Ile Leu Leu Val Gln Thr Ile Asp Ala Tyr Ala Met Phe Ile Ser Asn
275 280 285

Cys Ala Val Ser Thr Asn Ile Asp Ile Cys Phe Gln Val Thr Gln Thr
290 295 300

Ile Ala Phe Phe His Ser Cys Leu Asn Pro Val Leu Tyr Val Phe Val
305 310 315 320

Gly Glu Arg Phe Arg Arg Asp Leu Val Lys Thr Leu Lys Asn Leu Gly
325 330 335

Cys Ile Ser Gln Ala Gln Trp Val Ser Phe Thr Arg Arg Glu Gly Ser
340 345 350

Leu Lys Leu Ser Ser Met Leu Leu Glu Thr Thr Ser Gly Ala Leu Ser
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Leu

<210> 482
<211> 1248
<212> DNA
<213> Homo sapiens

<400> 482
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<210> 483
 <211> 415
 <212> PRT
 <213> Homo sapiens

<400> 483

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Leu	Ser	Leu	Ala	Ser	Asn	Ile	Ser	Gly	Leu	Gln	Cys	Asn	Ala	Ser	Val	35	40	45	
Asp	Leu	Ile	Gly	Thr	Cys	Trp	Pro	Arg	Ser	Pro	Ala	Gly	Gln	Leu	Val	50	55	60	
Val	Arg	Pro	Cys	Pro	Ala	Phe	Phe	Tyr	Gly	Val	Arg	Tyr	Asn	Thr	Thr	65	70	75	80
Asn	Asn	Gly	Tyr	Arg	Glu	Cys	Leu	Ala	Asn	Gly	Ser	Trp	Ala	Ala	Arg	85	90	95	
Val	Asn	Tyr	Ser	Glu	Cys	Gln	Glu	Ile	Leu	Asn	Glu	Glu	Lys	Lys	Ser	100	105	110	
Lys	Val	His	Tyr	His	Val	Ala	Val	Ile	Ile	Asn	Tyr	Leu	Gly	His	Cys	115	120	125	
Ile	Ser	Leu	Val	Ala	Leu	Leu	Val	Ala	Phe	Val	Leu	Phe	Leu	Arg	Leu	130	135	140	
Arg	Ser	Ile	Arg	Cys	Leu	Arg	Asn	Ile	Ile	His	Trp	Asn	Leu	Ile	Ser	145	150	155	160
Ala	Phe	Ile	Leu	Arg	Asn	Ala	Thr	Trp	Phe	Val	Val	Gln	Leu	Thr	Met	165	170	175	
Ser	Pro	Glu	Val	His	Gln	Ser	Asn	Val	Gly	Trp	Cys	Arg	Leu	Val	Thr	180	185	190	

Ala Ala Tyr Asn Tyr Phe His Val Thr Asn Phe Phe Trp Met Phe Gly
 195 200 205

Glu Gly Cys Tyr Leu His Thr Ala Ile Val Leu Thr Tyr Ser Thr Asp
 210 215 220

Arg Leu Arg Lys Trp Met Phe Ile Cys Ile Gly Trp Gly Val Pro Phe
 225 230 235 240

Pro Ile Ile Val Ala Trp Ala Ile Gly Lys Leu Tyr Tyr Asp Asn Glu
 245 250 255

Lys Cys Trp Phe Gly Lys Arg Pro Gly Val Tyr Thr Asp Tyr Ile Tyr
 260 265 270

Gln Gly Pro Met Ile Leu Val Leu Leu Ile Asn Phe Ile Phe Leu Phe
 275 280 285

Asn Ile Val Arg Ile Leu Met Thr Lys Leu Arg Ala Ser Thr Thr Ser
 290 295 300

Glu Thr Ile Gln Tyr Arg Lys Ala Val Lys Ala Pro Leu Val Leu Leu
 305 310 315 320

Pro Leu Leu Gly Ile Thr Tyr Met Leu Phe Phe Val Asn Pro Gly Glu
 325 330 335

Asp Glu Val Ser Arg Val Val Phe Ile Tyr Phe Asn Ser Phe Leu Glu
 340 345 350

Ser Phe Gln Gly Phe Phe Val Ser Val Phe Tyr Cys Phe Leu Asn Ser
 355 360 365

Glu Val Arg Ser Ala Ile Arg Lys Arg Trp His Arg Trp Gln Asp Lys
 370 375 380

His Ser Ile Arg Ala Arg Val Ala Arg Ala Met Ser Ile Pro Thr Ser
 385 390 395 400

Pro Thr Arg Val Ser Phe His Ser Ile Lys Gln Ser Thr Ala Val
 405 410 415

<210> 484
 <211> 1059
 <212> DNA
 <213> Homo sapiens

<400> 484
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 aactggtact ttgggaactt cctatgcaag gcagtccatg tcatctacac agtcaacctc 360
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cacaagtgga tttccatcac cgaggcccta gctttcttcc actgttgtct gaaccccatc 900
ctctatgctt tccttgagac caaattttaa acctctgccc agcacgcact cacctctgtg 960
agcagagggt ccagcctcaa gatcctctcc aaaggaaagc gaggtggaca ttcattctgtt 1020
tccactgagt ctgagtcctc aagttttcac tccagctaa 1059

```

<210> 485
 <211> 352
 <212> PRT
 <213> Homo sapiens

<400> 485

```

Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
  1             5             10             15

```

```

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
      20             25             30

```

```

Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
      35             40             45

```

```

Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
      50             55             60

```

```

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
      65             70             75             80

```

```

Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
      85             90             95

```

```

Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
      100            105            110

```

```

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
      115            120            125

```

```

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
      130            135            140

```

```

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
      145            150            155            160

```

```

Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
      165            170            175

```

```

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
      180            185            190

```

```

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
      195            200            205

```


Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
 210 215 220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Lys Lys Thr
 225 230 235 240

Thr Val Ile Leu Ile Leu Ala Phe Phe Ala Cys Trp Leu Pro Tyr Tyr
 245 250 255

Ile Gly Ile Ser Ile Asp Ser Phe Ile Leu Leu Glu Ile Ile Lys Gln
 260 265 270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Ile Thr Glu
 275 280 285

Ala Leu Ala Phe Phe His Cys Cys Leu Asn Pro Ile Leu Tyr Ala Phe
 290 295 300

Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
 305 310 315 320

Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
 325 330 335

His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Phe His Ser Ser
 340 345 350

<210> 486
 <211> 1341
 <212> DNA
 <213> Homo sapiens

<400> 486
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 tctgttcgta tcctcactgc ctgtttcctg tcgctgctca tcctgtccac gtcctgggg 120
 aacacgctgg tctgtgctgc cgttatcagg ttccgacacc tgcggtccaa ggtgaccaac 180
 ttctttgtca tctccttggc tgtgtcagat ctcttgggtg ccgtcctggt catgccctgg 240
 aaggcagtgg ctgagattgc tggccttctg ccctttgggt ccttctgtaa catctgggtg 300
 gcctttgaca tcatgtgctc cactgcatcc atcctcaacc tctgtgtgat cagcgtggac 360
 aggtattggg ctatctccag ccctttccgg tatgagagaa agatgacccc caaggcagcc 420
 ttcacatcga tcagtgtggc atggaccttg tctgtactca tctccttcat cccagtgcag 480
 ctgagctggc acaaggcaaa acccacaagc ccctctgatg gaaatgccac ttccctggct 540
 gagaccatag acaactgtga ctccagcctc agcaggacat atgccatctc atcctctgta 600
 ataagctttt acatccctgt ggccatcatg attgtcacct acaccaggat ctacaggatt 660
 gctcagaaac aaatacggcg cattgcggcc ttggagaggg cagcagtgca cgccaagaat 720
 tgccagacca ccacaggtaa tggaaagcct gtcgaatgtt ctcaaccgga aagttctttt 780
 aagatgtcct tcaaaagaga aactaaagtc aagaagactc tgtcgggtgat catgggtgtg 840
 tttgtgtgct gttggctacc tttcttcatc ttgaactgca ttttgccctt ctgtgggtct 900
 ggggagacgc agcccttctg cattgattcc aacaccttg acgtgtttgt gtgggttggg 960
 tgggctaatt catccttgaa ccccatcatt tatgccttta atgctgattt tcggaaggca 1020
 ttttcaacc tcttaggatg ctacagactt tgccctgcga cgaataatgc catagagacg 1080
 gtgagtatca ataacaatgg ggccgcgatg ttttccagcc atcatgagcc acgaggctcc 1140

atctccaagg agtgcaatct gggtttacctg atcccacatg ctgtgggctc ctctgaggac 1200
 ctgaaaaaagg aggaggcagc tggcatcgcc agacccttgg agaagctgtc cccagcccta 1260
 tcgggtcatat tggactatga cactgacgtc tctctggaga agatccaacc catgacacaa 1320
 aacggtcagc acccaacctg a 1341

<210> 487
 <211> 446
 <212> PRT
 <213> Homo sapiens

<400> 487
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 Glu Arg Asp Phe Ser Val Arg Ile Leu Thr Ala Cys Phe Leu Ser Leu
 20 25 30
 Leu Ile Leu Ser Thr Leu Leu Gly Asn Thr Leu Val Cys Ala Ala Val
 35 40 45
 Ile Arg Phe Arg His Leu Arg Ser Lys Val Thr Asn Phe Phe Val Ile
 50 55 60
 Ser Leu Ala Val Ser Asp Leu Leu Val Ala Val Leu Val Met Pro Trp
 65 70 75 80
 Lys Ala Val Ala Glu Ile Ala Gly Phe Trp Pro Phe Gly Ser Phe Cys
 85 90 95
 Asn Ile Trp Val Ala Phe Asp Ile Met Cys Ser Thr Ala Ser Ile Leu
 100 105 110
 Asn Leu Cys Val Ile Ser Val Asp Arg Tyr Trp Ala Ile Ser Ser Pro
 115 120 125
 Phe Arg Tyr Glu Arg Lys Met Thr Pro Lys Ala Ala Phe Ile Leu Ile
 130 135 140
 Ser Val Ala Trp Thr Leu Ser Val Leu Ile Ser Phe Ile Pro Val Gln
 145 150 155 160
 Leu Ser Trp His Lys Ala Lys Pro Thr Ser Pro Ser Asp Gly Asn Ala
 165 170 175
 Thr Ser Leu Ala Glu Thr Ile Asp Asn Cys Asp Ser Ser Leu Ser Arg
 180 185 190
 Thr Tyr Ala Ile Ser Ser Ser Val Ile Ser Phe Tyr Ile Pro Val Ala
 195 200 205
 Ile Met Ile Val Thr Tyr Thr Arg Ile Tyr Arg Ile Ala Gln Lys Gln
 210 215 220
 Ile Arg Arg Ile Ala Ala Leu Glu Arg Ala Ala Val His Ala Lys Asn
 225 230 235 240

105040-60592360

Cys Gln Thr Thr Thr Gly Asn Gly Lys Pro Val Glu Cys Ser Gln Pro
 245 250 255
 Glu Ser Ser Phe Lys Met Ser Phe Lys Arg Glu Thr Lys Val Lys Lys
 260 265 270
 Thr Leu Ser Val Ile Met Gly Val Phe Val Cys Cys Trp Leu Pro Phe
 275 280 285
 Phe Ile Leu Asn Cys Ile Leu Pro Phe Cys Gly Ser Gly Glu Thr Gln
 290 295 300
 Pro Phe Cys Ile Asp Ser Asn Thr Phe Asp Val Phe Val Trp Phe Gly
 305 310 315 320
 Trp Ala Asn Ser Ser Leu Asn Pro Ile Ile Tyr Ala Phe Asn Ala Asp
 325 330 335
 Phe Arg Lys Ala Phe Ser Thr Leu Leu Gly Cys Tyr Arg Leu Cys Pro
 340 345 350
 Ala Thr Asn Asn Ala Ile Glu Thr Val Ser Ile Asn Asn Asn Gly Ala
 355 360 365
 Ala Met Phe Ser Ser His His Glu Pro Arg Gly Ser Ile Ser Lys Glu
 370 375 380
 Cys Asn Leu Val Tyr Leu Ile Pro His Ala Val Gly Ser Ser Glu Asp
 385 390 395 400
 Leu Lys Lys Glu Glu Ala Ala Gly Ile Ala Arg Pro Leu Glu Lys Leu
 405 410 415
 Ser Pro Ala Leu Ser Val Ile Leu Asp Tyr Asp Thr Asp Val Ser Leu
 420 425 430
 Glu Lys Ile Gln Pro Met Thr Gln Asn Gly Gln His Pro Thr
 435 440 445

<210> 488
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 488
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 cccttcaacg ggtcagacgg gaaggcggac agacccact acaactacta tgccacacgg 120
 ctcaccctgc tcatcgctgt catcgctctc ggcaacgtgc tgggtgtgcat ggctgtgtcc 180
 cgcgagaagg cgctgcagac caccaccaac tacctgatcg tcagccttgc agtggccgac 240
 ctccctgtcg ccacactggg catgccctgg gttgtctacc tggaggtggg aggtgagtgg 300
 aaattcagca ggattcactg tgacatcttc gtcactctgg acgtcatgat gtgcacggcg 360
 agcatcctga acttgtgtgc catcagcatc gacaggtaca cagctgtggc catgcccatg 420
 ctgtacaata cgcgctacag ctccaagcgc cgggtcaccg tcatgatctc catcgtctgg 480
 gtccctgtcct tcaccatctc ctgccactc ctcttcggac tcaataacgc agaccagaac 540
 gagtgcacatc ttgccaaccc ggccttcgtg gtctactcct ccatcgtctc cttctacgtg 600
 cccttcattg tcaccctgct ggtctacatc aagatctaca ttgtcctccg cagacgccgc 660

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aagcgagtca acaccaaacy cagcagccga gctttcaggg cccacctgag ggctccacta 720
aagggcaact gtactcaccg cgaggacatg aaactctgca ccgttatcat gaagtctaat 780
gggagtttcc cagtgaacag gcgagagata gaggctgccc ggcgagccca ggagctggag 840
atggagatgc tctccagcac cagcccaccc gagaggaccc ggtacagccc catccctccc 900
agccaccacc agctgactct ccccgaccg tcccaccatg gtctccacag cactcccagc 960
agccccgcca aaccagagaa gaatgggcat gccaaagacc accccaagat tgccaagatc 1020
tttgagatcc agaccatgcc caatggcaaa acccgacact ccctcaagac catgagccgt 1080
aggaagctct cccagcagaa ggagaagaaa gccaatcaga tgctcgccat tgttctcggc 1140
gtgttcatca tctgtgtggt gcccttcttc atcacacaca tctgaacat acactgtgac 1200
tgcaacatcc cgctgtcct gtacagcgcc ttcacgtggc tgggctatgt caacagcgcc 1260
gtgaacccca tcatctacac caccttcaac attgagttcc gcaaggcctt cctgaagatc 1320
ctccactgct ga                                     1332

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<210> 489
 <211> 443
 <212> PRT
 <213> Homo sapiens

<400> 489

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Met Asp Pro Leu Asn Leu Ser Trp Tyr Asp Asp Asp Leu Glu Arg Gln
 1              5              10              15

Asn Trp Ser Arg Pro Phe Asn Gly Ser Asp Gly Lys Ala Asp Arg Pro
      20              25              30

His Tyr Asn Tyr Tyr Ala Thr Arg Leu Thr Leu Leu Ile Ala Val Ile
      35              40              45

Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala
      50              55              60

Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp
      65              70              75              80

Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val
      85              90              95

Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr
      100             105             110

Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile
      115             120             125

Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr
      130             135             140

Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ser Ile Val Trp
      145             150             155             160

Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn
      165             170             175

Ala Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr
      180             185             190

Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val

```

195					200					205					
Tyr	Ile	Lys	Ile	Tyr	Ile	Val	Leu	Arg	Arg	Arg	Arg	Lys	Arg	Val	Asn
210					215					220					
Thr	Lys	Arg	Ser	Ser	Arg	Ala	Phe	Arg	Ala	His	Leu	Arg	Ala	Pro	Leu
225					230					235					240
Lys	Gly	Asn	Cys	Thr	His	Pro	Glu	Asp	Met	Lys	Leu	Cys	Thr	Val	Ile
				245					250					255	
Met	Lys	Ser	Asn	Gly	Ser	Phe	Pro	Val	Asn	Arg	Arg	Arg	Val	Glu	Ala
			260					265					270		
Ala	Arg	Arg	Ala	Gln	Glu	Leu	Glu	Met	Glu	Met	Leu	Ser	Ser	Thr	Ser
			275				280					285			
Pro	Pro	Glu	Arg	Thr	Arg	Tyr	Ser	Pro	Ile	Pro	Pro	Ser	His	His	Gln
			290			295					300				
Leu	Thr	Leu	Pro	Asp	Pro	Ser	His	His	Gly	Leu	His	Ser	Thr	Pro	Asp
305					310					315					320
Ser	Pro	Ala	Lys	Pro	Glu	Lys	Asn	Gly	His	Ala	Lys	Asp	His	Pro	Lys
				325				330						335	
Ile	Ala	Lys	Ile	Phe	Glu	Ile	Gln	Thr	Met	Pro	Asn	Gly	Lys	Thr	Arg
			340					345					350		
Thr	Ser	Leu	Lys	Thr	Met	Ser	Arg	Arg	Lys	Leu	Ser	Gln	Gln	Lys	Glu
			355				360					365			
Lys	Lys	Ala	Lys	Gln	Met	Leu	Ala	Ile	Val	Leu	Gly	Val	Phe	Ile	Ile
			370			375					380				
Cys	Trp	Leu	Pro	Phe	Phe	Ile	Thr	His	Ile	Leu	Asn	Ile	His	Cys	Asp
385					390					395					400
Cys	Asn	Ile	Pro	Pro	Val	Leu	Tyr	Ser	Ala	Phe	Thr	Trp	Leu	Gly	Tyr
				405					410					415	
Val	Asn	Ser	Ala	Val	Asn	Pro	Ile	Ile	Tyr	Thr	Thr	Phe	Asn	Ile	Glu
			420				425					430			
Phe	Arg	Lys	Ala	Phe	Leu	Lys	Ile	Leu	His	Cys					
			435				440								

<210> 490
 <211> 1203
 <212> DNA
 <213> Homo sapiens

<400> 490
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 acaggtgccg gccaggcccg cccacatgcc tactatgcc tctctactg cgcgctcadc 120
 ctggccatcg tcttcggcaa tggcctgggtg tgcattggctg tgctgaagga gcgggccttg 180

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cagactacca ccaactactt agtagtgagc ctggctgtgg cagacttgct ggtggccacc 240
ttggtgatgc cctgggtggt atacctggag gtgacagggt gagtctggaa tttcagccgc 300
atttgctgtg atgtttttgt caccctggat gtcattgatgt gtacagccag catccttaat 360
ctctgtgcc a tcagcataga caggtacact gcagtggtca tgcccgttca ctaccagcat 420
ggcacgggac agagctcctg tcggcgcggt gccctcatga tcacggccgt ctgggtactg 480
gcctttgctg tgtcctgccc tcttctgttt ggctttaata ccacagggga cccactgtc 540
tgctccatct ccaaccctga ttttgtcatc tactcttcag tgggtgcctt ctacctgcc 600
tttgagtgga ctgtccttgt ctatgccaga atctatgtgg tgctgaaaca aaggagacgg 660
aaaaggatcc tcaactcgaca gaacagtcag tgcaacagtg tcaggcctgg cttcccccaa 720
caaaccctct ctctgaccc ggcacatctg gagctgaagc gttactacag catctgccag 780
gacactgcct tgggtggacc aggccttcaa gaaagaggag gagagttgaa aagagaggag 840
aagactcgga attcctgag tcccaccata gcgcccagc tcagcttaga agttcgaaaa 900
ctcagcaatg gcagattatc gacatctttg aagctggggc ccctgcaacc tcggggagtg 960
ccacttcggg agaagaaggc aaaacaaatg gtggccattg tgcttggggc cttcattgtc 1020
tgctggctgc ccttcttctt gacccatggt ctcaataccc actgccagac atgccacgtg 1080
tccccagagc tttacagtgc cagcacatgg ctgggctacg tgaatagcgc cctcaaccct 1140
gtgatctata ccaccttcaa tatcgagttc cggaaagcct tcctcaagat cctgtcttgc 1200
tga 1203

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<210> 491
 <211> 400
 <212> PRT
 <213> Homo sapiens

<400> 491

Met	Ala	Ser	Leu	Ser	Gln	Leu	Ser	Ser	His	Leu	Asn	Tyr	Thr	Cys	Gly
1				5					10					15	
Ala	Glu	Asn	Ser	Thr	Gly	Ala	Ser	Gln	Ala	Arg	Pro	His	Ala	Tyr	Tyr
		20						25					30		
Ala	Leu	Ser	Tyr	Cys	Ala	Leu	Ile	Leu	Ala	Ile	Val	Phe	Gly	Asn	Gly
		35					40					45			
Leu	Val	Cys	Met	Ala	Val	Leu	Lys	Glu	Arg	Ala	Leu	Gln	Thr	Thr	Thr
	50					55					60				
Asn	Tyr	Leu	Val	Val	Ser	Leu	Ala	Val	Ala	Asp	Leu	Leu	Val	Ala	Thr
65					70				75						80
Leu	Val	Met	Pro	Trp	Val	Val	Tyr	Leu	Glu	Val	Thr	Gly	Gly	Val	Trp
				85					90					95	
Asn	Phe	Ser	Arg	Ile	Cys	Cys	Asp	Val	Phe	Val	Thr	Leu	Asp	Val	Met
			100					105					110		
Met	Cys	Thr	Ala	Ser	Ile	Leu	Asn	Leu	Cys	Ala	Ile	Ser	Ile	Asp	Arg
		115					120					125			
Tyr	Thr	Ala	Val	Val	Met	Pro	Val	His	Tyr	Gln	His	Gly	Thr	Gly	Gln
	130					135					140				
Ser	Ser	Cys	Arg	Arg	Val	Ala	Leu	Met	Ile	Thr	Ala	Val	Trp	Val	Leu
145					150					155					160
Ala	Phe	Ala	Val	Ser	Cys	Pro	Leu	Leu	Phe	Gly	Phe	Asn	Thr	Thr	Gly

165	170	175
Asp Pro Thr Val Cys Ser Ile Ser Asn Pro Asp Phe Val Ile Tyr Ser		
180	185	190
Ser Val Val Ser Phe Tyr Leu Pro Phe Gly Val Thr Val Leu Val Tyr		
195	200	205
Ala Arg Ile Tyr Val Val Leu Lys Gln Arg Arg Arg Lys Arg Ile Leu		
210	215	220
Thr Arg Gln Asn Ser Gln Cys Asn Ser Val Arg Pro Gly Phe Pro Gln		
225	230	235
Gln Thr Leu Ser Pro Asp Pro Ala His Leu Glu Leu Lys Arg Tyr Tyr		
245	250	255
Ser Ile Cys Gln Asp Thr Ala Leu Gly Gly Pro Gly Phe Gln Glu Arg		
260	265	270
Gly Gly Glu Leu Lys Arg Glu Glu Lys Thr Arg Asn Ser Leu Ser Pro		
275	280	285
Thr Ile Ala Pro Lys Leu Ser Leu Glu Val Arg Lys Leu Ser Asn Gly		
290	295	300
Arg Leu Ser Thr Ser Leu Lys Leu Gly Pro Leu Gln Pro Arg Gly Val		
305	310	315
Pro Leu Arg Glu Lys Lys Ala Lys Gln Met Val Ala Ile Val Leu Gly		
325	330	335
Ala Phe Ile Val Cys Trp Leu Pro Phe Phe Leu Thr His Val Leu Asn		
340	345	350
Thr His Cys Gln Thr Cys His Val Ser Pro Glu Leu Tyr Ser Ala Thr		
355	360	365
Thr Trp Leu Gly Tyr Val Asn Ser Ala Leu Asn Pro Val Ile Tyr Thr		
370	375	380
Thr Phe Asn Ile Glu Phe Arg Lys Ala Phe Leu Lys Ile Leu Ser Cys		
385	390	395
		400

<210> 492
 <211> 1434
 <212> DNA
 <213> Homo sapiens

<400> 492
 atgctgccgc caggcagcaa cggcaccgcg taccggggc agttcgctct ataccagcag 60
 ctggcgcagg ggaacgccgt ggggggctcg gcgggggcac cgccactggg gccctcacag 120
 gtgggtcaccg cctgctgtct gaccctactc atcatctgga ccctgctggg caacgtgctg 180

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gtgtgcgag ccacgtgag gagcgccac ctgcgcgcca acatgaccaa cgtcttcac 240
gtgtctctgg ccgtgtctga ccttttctgt gcgctgctgg tcatgccctg gaaggcagtc 300
gccgaggtgg ccggttactg gccctttgga gcgttctgag acgtctgggt ggccttcgac 360
atcatgtgct ccaactgcctc catcctgaac ctgtgcgta tcagcgtgga ccgctactgg 420
gccatctcca ggcccttcgg ctacaagcgc aagatgactc agcgcagtc cttgggtcatg 480
gtcggcctgg catggacctt gtccatcctc atctccttca ttccgggtcca gctcaactgg 540
cacagggacc aggcggcctc ttggggcggg ctggacctgc caaacaacct ggccaactgg 600
acgccctggg agggaggactt ttggggagccc gacgtgaatg cagagaactg tgactccagc 660
ctgaatcgaa cctacgccat ctcttctctg ctcatcagct tctacatccc cgttgccatc 720
atgatcgtga cctacacgag catctaccgc atcgcccagg tgcagatccg caggatttcc 780
tccctggaga gggccgcaga gcacgcgcag agctgccgga gcagcgcagc ctgcgcgccc 840
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cgcacgccgg tggagacggt gaacatcagc aatgagctca tctcctacaa ccaagacatc 1200
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ggcaaccggg aggtggacaa cgacgaggag gagggtcctt tcgatcgcag gttccagatc 1320
tatcagacgt ccccagatgg tgaccctggt gctgagctctg tctgggagct ggactgcgag 1380
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<210> 493
 <211> 477
 <212> PRT
 <213> Homo sapiens

<400> 493
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 1 5 10 15
 Leu Tyr Gln Gln Leu Ala Gln Gly Asn Ala Val Gly Gly Ser Ala Gly
 20 25 30
 Ala Pro Pro Leu Gly Pro Ser Gln Val Val Thr Ala Cys Leu Leu Thr
 35 40 45
 Leu Leu Ile Ile Trp Thr Leu Leu Gly Asn Val Leu Val Cys Ala Ala
 50 55 60
 Ile Val Arg Ser Arg His Leu Arg Ala Asn Met Thr Asn Val Phe Ile
 65 70 75 80
 Val Ser Leu Ala Val Ser Asp Leu Phe Val Ala Leu Leu Val Met Pro
 85 90 95
 Trp Lys Ala Val Ala Glu Val Ala Gly Tyr Trp Pro Phe Gly Ala Phe
 100 105 110
 Cys Asp Val Trp Val Ala Phe Asp Ile Met Cys Ser Thr Ala Ser Ile
 115 120 125
 Leu Asn Leu Cys Val Ile Ser Val Asp Arg Tyr Trp Ala Ile Ser Arg
 130 135 140
 Pro Phe Arg Tyr Lys Arg Lys Met Thr Gln Arg Met Ala Leu Val Met

145		150		155		160
Val Gly Leu Ala Trp Thr Leu Ser Ile Leu Ile Ser Phe Ile Pro Val						
		165		170		175
Gln Leu Asn Trp His Arg Asp Gln Ala Ala Ser Trp Gly Gly Leu Asp						
		180		185		190
Leu Pro Asn Asn Leu Ala Asn Trp Thr Pro Trp Glu Glu Asp Phe Trp						
		195		200		205
Glu Pro Asp Val Asn Ala Glu Asn Cys Asp Ser Ser Leu Asn Arg Thr						
		210		215		220
Tyr Ala Ile Ser Ser Ser Leu Ile Ser Phe Tyr Ile Pro Val Ala Ile						
		225		230		235
Met Ile Val Thr Tyr Thr Arg Ile Tyr Arg Ile Ala Gln Val Gln Ile						
		245		250		255
Arg Arg Ile Ser Ser Leu Glu Arg Ala Ala Glu His Ala Gln Ser Cys						
		260		265		270
Arg Ser Ser Ala Ala Cys Ala Pro Asp Thr Ser Leu Arg Ala Ser Ile						
		275		280		285
Lys Lys Glu Thr Lys Val Lys Lys Thr Leu Ser Val Ile Met Gly Val						
		290		295		300
Phe Val Cys Cys Trp Leu Pro Phe Phe Ile Leu Asn Cys Met Val Pro						
		305		310		315
Phe Cys Ser Gly His Pro Glu Gly Pro Pro Ala Gly Phe Pro Cys Val						
		325		330		335
Ser Glu Thr Thr Phe Asp Val Phe Val Trp Phe Gly Trp Ala Asn Ser						
		340		345		350
Ser Leu Asn Pro Val Ile Tyr Ala Phe Asn Ala Asp Phe Gln Lys Val						
		355		360		365
Phe Ala Gln Leu Leu Gly Cys Ser His Phe Cys Ser Arg Thr Pro Val						
		370		375		380
Glu Thr Val Asn Ile Ser Asn Glu Leu Ile Ser Tyr Asn Gln Asp Ile						
		385		390		395
Val Phe His Lys Glu Ile Ala Ala Ala Tyr Ile His Met Met Pro Asn						
		405		410		415
Ala Val Thr Pro Gly Asn Arg Glu Val Asp Asn Asp Glu Glu Glu Gly						
		420		425		430
Pro Phe Asp Arg Met Phe Gln Ile Tyr Gln Thr Ser Pro Asp Gly Asp						
		435		440		445
Pro Val Ala Glu Ser Val Trp Glu Leu Asp Cys Glu Gly Glu Ile Ser						

450

455

460

Leu Asp Lys Ile Thr Pro Phe Thr Pro Asn Gly Phe His
 465 470 475

<210> 494
 <211> 1284
 <212> DNA
 <213> Homo sapiens

<400> 494
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 cgtggcacag agctcagctt cctgggttacc actcatcaac ccactaattt ggtcctaccc 180
 agcaatggct caatgcacaa ctattgcccc cagcagacta aaattacttc agctttcaaa 240
 tacattaaca ctgtgatata ttgtactatt ttcacgtggg gaatgggtggg gaatgcaact 300
 ctgctcagga tcatttacca gaacaaatgt atgaggaatg gcccacacgc gctgatagcc 360
 agtcttgccc ttggagacct tatctatgtg gtcattgatc tccctatcaa tgtattttaag 420
 ctgctggctg ggcgctggcc ttttgatcac aatgactttg gcgtatttct ttgcaagctg 480
 ttcccccttt tgcagaagtc ctcggtgggg atcaccgtcc tcaacctctg cgctcttagt 540
 gttgacaggt acagagcagt tgcctcctgg agtcgtgttc aggggaattgg gattcctttg 600
 gtaactgcca ttgaaattgt ctccatctgg atcctgtcct ttatcctggc cattcctgaa 660
 gcgattggct tcgtcatggg accctttgaa tataggggtg aacagcataa aacctgtatg 720
 ctcaatgcca catcaaaatt catggagttc taccaagatg taaaggactg gtggctcttc 780
 gggttctatt tctgtatgcc cttggtgtgc actgcgatct tctacaccct catgacttgt 840
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 cgtcgagaag tgaaaaaac agttttctgc ttggttgtaa tttttgctct ttgctgggtc 960
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 tgtgaattac ttagtttctt actgctcatg gattacatcg gtattaactt ggcaaccatg 1080
 aattcatgta taaaccccat agctctgtat tttgtgagca agaaatttaa aaattgtttc 1140
 cagtcatgcc tctgctgctg ctgttaccag tccaaaagtc tgatgacctc ggtcccatg 1200
 aacggaacaa gcatccagtg gaagaaccac gatcaaaaaca accacaacac agaccggagc 1260
 agccataagg acagcatgaa ctga 1284

<210> 495
 <211> 427
 <212> PRT
 <213> Homo sapiens

<400> 495
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 Cys Val Ile Ser Asp Asn Pro Glu Arg Tyr Ser Thr Asn Leu Ser Asn
 20 25 30
 His Val Asp Asp Phe Thr Thr Phe Arg Gly Thr Glu Leu Ser Phe Leu
 35 40 45
 Val Thr Thr His Gln Pro Thr Asn Leu Val Leu Pro Ser Asn Gly Ser
 50 55 60
 Met His Asn Tyr Cys Pro Gln Gln Thr Lys Ile Thr Ser Ala Phe Lys
 65 70 75 80

Tyr	Ile	Asn	Thr	Val	Ile	Ser	Cys	Thr	Ile	Phe	Ile	Val	Gly	Met	Val	85	90	95
Gly	Asn	Ala	Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Gln	Asn	Lys	Cys	Met	Arg	100	105	110
Asn	Gly	Pro	Asn	Ala	Leu	Ile	Ala	Ser	Leu	Ala	Leu	Gly	Asp	Leu	Ile	115	120	125
Tyr	Val	Val	Ile	Asp	Leu	Pro	Ile	Asn	Val	Phe	Lys	Leu	Leu	Ala	Gly	130	135	140
Arg	Trp	Pro	Phe	Asp	His	Asn	Asp	Phe	Gly	Val	Phe	Leu	Cys	Lys	Leu	145	150	155
Phe	Pro	Phe	Leu	Gln	Lys	Ser	Ser	Val	Gly	Ile	Thr	Val	Leu	Asn	Leu	165	170	175
Cys	Ala	Leu	Ser	Val	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg	180	185	190
Val	Gln	Gly	Ile	Gly	Ile	Pro	Leu	Val	Thr	Ala	Ile	Glu	Ile	Val	Ser	195	200	205
Ile	Trp	Ile	Leu	Ser	Phe	Ile	Leu	Ala	Ile	Pro	Glu	Ala	Ile	Gly	Phe	210	215	220
Val	Met	Val	Pro	Phe	Glu	Tyr	Arg	Gly	Glu	Gln	His	Lys	Thr	Cys	Met	225	230	235
Leu	Asn	Ala	Thr	Ser	Lys	Phe	Met	Glu	Phe	Tyr	Gln	Asp	Val	Lys	Asp	245	250	255
Trp	Trp	Leu	Phe	Gly	Phe	Tyr	Phe	Cys	Met	Pro	Leu	Val	Cys	Thr	Ala	260	265	270
Ile	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met	Leu	Asn	Arg	Arg	Asn	Gly	275	280	285
Ser	Leu	Arg	Ile	Ala	Leu	Ser	Glu	His	Leu	Lys	Gln	Arg	Arg	Glu	Val	290	295	300
Lys	Lys	Thr	Val	Phe	Cys	Leu	Val	Val	Ile	Phe	Ala	Leu	Cys	Trp	Phe	305	310	315
Pro	Leu	His	Leu	Ser	Arg	Ile	Leu	Lys	Lys	Thr	Val	Tyr	Asn	Glu	Met	325	330	335
Asp	Lys	Asn	Arg	Cys	Glu	Leu	Leu	Ser	Phe	Leu	Leu	Leu	Met	Asp	Tyr	340	345	350
Ile	Gly	Ile	Asn	Leu	Ala	Thr	Met	Asn	Ser	Cys	Ile	Asn	Pro	Ile	Ala	355	360	365
Leu	Tyr	Phe	Val	Ser	Lys	Lys	Phe	Lys	Asn	Cys	Phe	Gln	Ser	Cys	Leu	370	375	380

Cys Cys Cys Cys Tyr Gln Ser Lys Ser Leu Met Thr Ser Val Pro Met
385 390 395 400

Asn Gly Thr Ser Ile Gln Trp Lys Asn His Asp Gln Asn Asn His Asn
405 410 415

Thr Asp Arg Ser Ser His Lys Asp Ser Met Asn
420 425

<210> 496
<211> 1329
<212> DNA
<213> Homo sapiens

<400> 496
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caaaccgcag agataatgac gccacccact aagaccttat ggcccaaggg ttccaacgcc 180
agtctggcgc ggtcgttggc acctgcggag gtgcctaaag gagacaggac ggcaggatct 240
ccgccacgca ccactctccc tcccccgctc caaggaccca tcgagatcaa ggagactttc 300
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gccagcttgg ctctgggaga cctgctgcac atcgtcattg acatccctat caatgtctac 480
aagctgctgg cagaggactg gccatttgga gctgagatgt gtaagctggt gcctttcata 540
cagaaagcct ccgtgggaat cactgtgctg agtctatgtg ctctgagtat tgacagatat 600
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gaaattgttt tgatttgggt ggtctctgtg gttctggctg tccctgaagc catagggttt 720
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tcatcttga 1329

<210> 497
<211> 442
<212> PRT
<213> Homo sapiens

<400> 497
Met Gln Pro Pro Pro Ser Leu Cys Gly Arg Ala Leu Val Ala Leu Val
1 5 10 15
Leu Ala Cys Gly Leu Ser Arg Ile Trp Gly Glu Glu Arg Gly Phe Pro
20 25 30
Pro Asp Arg Ala Thr Pro Leu Leu Gln Thr Ala Glu Ile Met Thr Pro
35 40 45
Pro Thr Lys Thr Leu Trp Pro Lys Gly Ser Asn Ala Ser Leu Ala Arg

50					55					60					
Ser	Leu	Ala	Pro	Ala	Glu	Val	Pro	Lys	Gly	Asp	Arg	Thr	Ala	Gly	Ser
65					70					75					80
Pro	Pro	Arg	Thr	Ile	Ser	Pro	Pro	Pro	Cys	Gln	Gly	Pro	Ile	Glu	Ile
				85					90					95	
Lys	Glu	Thr	Phe	Lys	Tyr	Ile	Asn	Thr	Val	Val	Ser	Cys	Leu	Val	Phe
			100					105					110		
Val	Leu	Gly	Ile	Ile	Gly	Asn	Ser	Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Lys
		115					120					125			
Asn	Lys	Cys	Met	Arg	Asn	Gly	Pro	Asn	Ile	Leu	Ile	Ala	Ser	Leu	Ala
	130					135					140				
Leu	Gly	Asp	Leu	Leu	His	Ile	Val	Ile	Asp	Ile	Pro	Ile	Asn	Val	Tyr
145					150					155					160
Lys	Leu	Leu	Ala	Glu	Asp	Trp	Pro	Phe	Gly	Ala	Glu	Met	Cys	Lys	Leu
				165					170					175	
Val	Pro	Phe	Ile	Gln	Lys	Ala	Ser	Val	Gly	Ile	Thr	Val	Leu	Ser	Leu
			180					185					190		
Cys	Ala	Leu	Ser	Ile	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg
	195						200					205			
Ile	Lys	Gly	Ile	Gly	Val	Pro	Lys	Trp	Thr	Ala	Val	Glu	Ile	Val	Leu
	210					215					220				
Ile	Trp	Val	Val	Ser	Val	Val	Leu	Ala	Val	Pro	Glu	Ala	Ile	Gly	Phe
225					230					235					240
Asp	Ile	Ile	Thr	Met	Asp	Tyr	Lys	Gly	Ser	Tyr	Leu	Arg	Ile	Cys	Leu
			245						250					255	
Leu	His	Pro	Val	Gln	Lys	Thr	Ala	Phe	Met	Gln	Phe	Tyr	Lys	Thr	Ala
			260					265					270		
Lys	Asp	Trp	Trp	Leu	Phe	Ser	Phe	Tyr	Phe	Cys	Leu	Pro	Leu	Ala	Ile
		275					280					285			
Thr	Ala	Phe	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met	Leu	Arg	Lys	Lys
	290					295					300				
Ser	Gly	Met	Gln	Ile	Ala	Leu	Asn	Asp	His	Leu	Lys	Gln	Arg	Arg	Glu
305					310					315					320
Val	Lys	Lys	Thr	Val	Phe	Cys	Leu	Val	Leu	Val	Phe	Ala	Leu	Cys	Trp
			325						330					335	
Leu	Pro	Leu	His	Leu	Ser	Arg	Ile	Leu	Lys	Leu	Thr	Leu	Tyr	Asn	Gln
			340					345					350		
Asn	Asp	Pro	Asn	Arg	Cys	Glu	Leu	Leu	Ser	Phe	Leu	Leu	Val	Leu	Asp

355

360

365

Tyr Ile Gly Ile Asn Met Ala Ser Leu Asn Ser Cys Ile Asn Pro Ile
370 375 380

Ala Leu Tyr Leu Val Ser Lys Arg Phe Lys Asn Cys Phe Lys Ser Cys
385 390 395 400

Leu Cys Cys Trp Cys Gln Ser Phe Glu Glu Lys Gln Ser Leu Glu Glu
405 410 415

Lys Gln Ser Cys Leu Lys Phe Lys Ala Asn Asp His Gly Tyr Asp Asn
420 425 430

Phe Arg Ser Ser Asn Lys Tyr Ser Ser Ser
435 440

<210> 498

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 498

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gtcctgggca acgggcttgt gatctgggtg gctggattcc ggatgacaca cacagtcacc 180
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tcgccctgga ccaacgaccc taaagagagg ataaatgtgg ccgttgccat gttgacgggtg 600
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cgggtcctct cctttgtcgc agcagccttt tttctctgct ggtccccata tcagggtggtg 780
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attgcagtgg atgtgacaag tgccctggcc ttcttcaaca gctgcctcaa ccccatgctc 900
tatgtcttca tgggccagga ctccggggag aggctgatcc acgcccttcc cgccagttctg 960
gagaggggcc tgaccgagga ctcaacccaa accagtgaca cagctaccaa ttctacttta 1020
ccttctgcag aggtggagtt acaggcaaag tga 1053

<210> 499

<211> 350

<212> PRT

<213> Homo sapiens

<400> 499

Met Glu Thr Asn Ser Ser Leu Pro Thr Asn Ile Ser Gly Gly Thr Pro
1 5 10 15

Ala Val Ser Ala Gly Tyr Leu Phe Leu Asp Ile Ile Thr Tyr Leu Val
20 25 30

Phe Ala Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile

<210> 500
 <211> 1056
 <212> DNA
 <213> Homo sapiens

<400> 500
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 gtctctggga atgggcttgt gatctgggtg gctggattcc ggatgacacg cacagtcacc 180
 accatctgtt acctgaacct ggccctggct gacttttctt tcacggccac attaccattc 240
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 attcacatcg tgggtggacat caacctcttt ggaagtgtct tcttgattgg tttcattgca 360
 ctggaccgct gcatttgtgt cctgcatcca gtctgggccc agaaccaccg cactgtgagt 420
 ctggccatga aggtgatcgt cggaccttggt attcttgctc tagtccttac cttgccagtt 480
 ttctctcttt tgactacagt aactattcca aatggggaca catactgtac tttcaacttt 540
 gcatcctggg gtggcaccct tgaggagagg ctgaagggtg ccattaccat gctgacagcc 600
 agagggatta tccggtttgt cattggcttt agcttgccga tgtccattgt tgccatctgc 660
 tatgggtcca ttgcagccaa gatccacaaa aagggcata ttaaattccag ccgtcccaaa 720
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<210> 501
 <211> 351
 <212> PRT
 <213> Homo sapiens

<400> 501
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 1 5 10 15
 Tyr Glu Ser Ala Gly Tyr Thr Val Leu Arg Ile Leu Pro Leu Val Val
 20 25 30
 Leu Gly Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile
 35 40 45
 Trp Val Ala Gly Phe Arg Met Thr Arg Thr Val Thr Thr Ile Cys Tyr
 50 55 60
 Leu Asn Leu Ala Leu Ala Asp Phe Ser Phe Thr Ala Thr Leu Pro Phe
 65 70 75 80
 Leu Ile Val Ser Met Ala Met Gly Glu Lys Trp Pro Phe Gly Trp Phe
 85 90 95
 Leu Cys Lys Leu Ile His Ile Val Val Asp Ile Asn Leu Phe Gly Ser
 100 105 110
 Val Phe Leu Ile Gly Phe Ile Ala Leu Asp Arg Cys Ile Cys Val Leu

115					120					125						
His	Pro	Val	Trp	Ala	Gln	Asn	His	Arg	Thr	Val	Ser	Leu	Ala	Met	Lys	
130					135					140						
Val	Ile	Val	Gly	Pro	Trp	Ile	Leu	Ala	Leu	Val	Leu	Thr	Leu	Pro	Val	
145					150					155					160	
Phe	Leu	Phe	Leu	Thr	Thr	Val	Thr	Ile	Pro	Asn	Gly	Asp	Thr	Tyr	Cys	
165					170					175						
Thr	Phe	Asn	Phe	Ala	Ser	Trp	Gly	Gly	Thr	Pro	Glu	Glu	Arg	Leu	Lys	
180					185					190						
Val	Ala	Ile	Thr	Met	Leu	Thr	Ala	Arg	Gly	Ile	Ile	Arg	Phe	Val	Ile	
195					200					205						
Gly	Phe	Ser	Leu	Pro	Met	Ser	Ile	Val	Ala	Ile	Cys	Tyr	Gly	Leu	Ile	
210					215					220						
Ala	Ala	Lys	Ile	His	Lys	Lys	Gly	Met	Ile	Lys	Ser	Ser	Arg	Pro	Lys	
225					230					235					240	
Arg	Val	Leu	Thr	Ala	Val	Val	Ala	Ser	Phe	Phe	Ile	Cys	Trp	Phe	Pro	
245					250					255						
Phe	Gln	Leu	Val	Ala	Leu	Leu	Gly	Thr	Val	Trp	Leu	Lys	Glu	Met	Leu	
260					265					270						
Phe	Tyr	Gly	Lys	Tyr	Lys	Ile	Ile	Asp	Ile	Leu	Val	Asn	Pro	Thr	Ser	
275					280					285						
Ser	Leu	Ala	Phe	Phe	Asn	Ser	Cys	Leu	Asn	Pro	Met	Leu	Tyr	Val	Phe	
290					295					300						
Val	Gly	Gln	Asp	Phe	Arg	Glu	Arg	Leu	Ile	His	Ser	Leu	Pro	Thr	Ser	
305					310					315					320	
Leu	Glu	Arg	Ala	Leu	Ser	Glu	Asp	Ser	Ala	Pro	Thr	Asn	Asp	Thr	Ala	
325					330					335						
Ala	Asn	Ser	Ala	Ser	Pro	Pro	Ala	Glu	Thr	Glu	Leu	Gln	Ala	Met		
340					345					350						

<210> 502
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 502
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 ggccatgatct tcgctgtggg cgtgctgggc aacagcctag tgatcaccgt gctggcgcg 180
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 tgggtgctgg gcgccttcct ctgcaagttc atccactact tcttcaccgt gtccatgctg 360

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gtgagcatct tcaccctggc cgcgatgtcc gtggaccgct acgtggccat cgtgcactcg 420
cggcgctcct cctccctcag ggtgtcccgc aacgcgctgc tgggcgtggg ctgcatctgg 480
gcgctgtcca ttgccatggc ctgcgccgtg gcctaccacc agggcctctt ccaccgcgc 540
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atcatttatg catttctctc tgaatttctc aggaaggcct ataaacaagt gttcaagtgt 960
cacattcgca aagattcaca cctgagtgat actaaagaaa ataaaagtcg aatagacacc 1020
ccaccatcaa ccaattgtac tcatgtgtga 1050

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<210> 503
 <211> 349
 <212> PRT
 <213> Homo sapiens

<400> 503

Met Glu Leu Ala Val Gly Asn Leu Ser Glu Gly Asn Ala Ser Cys Pro
 1 5 10 15

Glu Pro Pro Ala Pro Glu Pro Gly Pro Leu Phe Gly Ile Gly Val Glu
 20 25 30

Asn Phe Val Thr Leu Val Val Phe Gly Leu Ile Phe Ala Leu Gly Val
 35 40 45

Leu Gly Asn Ser Leu Val Ile Thr Val Leu Ala Arg Ser Lys Pro Gly
 50 55 60

Lys Pro Arg Ser Thr Thr Asn Leu Phe Ile Leu Asn Leu Ser Ile Ala
 65 70 75 80

Asp Leu Ala Tyr Leu Leu Phe Cys Ile Pro Phe Gln Ala Thr Val Tyr
 85 90 95

Ala Leu Pro Thr Trp Val Leu Gly Ala Phe Ile Cys Lys Phe Ile His
 100 105 110

Tyr Phe Phe Thr Val Ser Met Leu Val Ser Ile Phe Thr Leu Ala Ala
 115 120 125

Met Ser Val Asp Arg Tyr Val Ala Ile Val His Ser Arg Arg Ser Ser
 130 135 140

Ser Leu Arg Val Ser Arg Asn Ala Leu Leu Gly Val Gly Cys Ile Trp
 145 150 155 160

Ala Leu Ser Ile Ala Met Ala Ser Pro Val Ala Tyr His Gln Gly Leu
 165 170 175

Phe His Pro Arg Ala Ser Asn Gln Thr Phe Cys Trp Glu Gln Trp Pro
 180 185 190

Asp Pro Arg His Lys Lys Ala Tyr Val Val Cys Thr Phe Val Phe Gly

195

200

205

Tyr Leu Leu Pro Leu Leu Leu Ile Cys Phe Cys Tyr Ala Lys Val Leu
210 215 220

Asn His Leu His Lys Lys Leu Lys Asn Met Ser Lys Lys Ser Glu Ala
225 230 235 240

Ser Lys Lys Lys Thr Lys Gln Thr Val Leu Val Val Val Val Val Phe
245 250 255

Gly Ile Ser Trp Leu Pro His His Ile Ile His Leu Trp Ala Glu Phe
260 265 270

Gly Val Phe Pro Leu Thr Pro Ala Ser Phe Leu Phe Arg Ile Thr Ala
275 280 285

His Cys Leu Ala Tyr Ser Asn Ser Ser Val Asn Pro Ile Ile Tyr Ala
290 295 300

Phe Leu Ser Glu Asn Phe Arg Lys Ala Tyr Lys Gln Val Phe Lys Cys
305 310 315 320

His Ile Arg Lys Asp Ser His Leu Ser Asp Thr Lys Glu Asn Lys Ser
325 330 335

Arg Ile Asp Thr Pro Pro Ser Thr Asn Cys Thr His Val
340 345

<210> 504

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 504

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gtgcacttcc tcatcttct caccatgcac gccagcagct tcacgctggc cgcctgtctc 360
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gtggccgcgc tcttctgct ctgctggatg cccaccacag cgctcatcct ctgctgtgtg 780
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atcctgacgg ttgatgtggc ctga 1164

<210> 505
 <211> 387
 <212> PRT
 <213> Homo sapiens

<400> 505
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 Gly Gly Gly Gly Trp His Pro Glu Ala Val Ile Val Pro Leu Leu Phe
 20 25 30
 Ala Leu Ile Phe Leu Val Gly Thr Val Gly Asn Thr Leu Val Leu Ala
 35 40 45
 Val Leu Leu Arg Gly Gly Gln Ala Val Ser Thr Thr Asn Leu Phe Ile
 50 55 60
 Leu Asn Leu Gly Val Ala Asp Leu Cys Phe Ile Leu Cys Cys Val Pro
 65 70 75 80
 Phe Gln Ala Thr Ile Tyr Thr Leu Asp Gly Trp Val Phe Gly Ser Leu
 85 90 95
 Leu Cys Lys Ala Val His Phe Leu Ile Phe Leu Thr Met His Ala Ser
 100 105 110
 Ser Phe Thr Leu Ala Ala Val Ser Leu Asp Arg Tyr Leu Ala Ile Arg
 115 120 125
 Tyr Pro Leu His Ser Arg Glu Leu Arg Thr Pro Arg Asn Ala Leu Ala
 130 135 140
 Ala Ile Gly Leu Ile Trp Gly Leu Ser Leu Leu Phe Ser Gly Pro Tyr
 145 150 155 160
 Leu Ser Tyr Tyr Arg Gln Ser Gln Leu Ala Asn Leu Thr Val Cys His
 165 170 175
 Pro Ala Trp Ser Ala Pro Arg Arg Arg Ala Met Asp Ile Cys Thr Phe
 180 185 190
 Val Phe Ser Tyr Leu Leu Pro Val Leu Val Leu Gly Leu Thr Tyr Ala
 195 200 205
 Arg Thr Leu Arg Tyr Leu Trp Arg Ala Val Asp Pro Val Ala Ala Gly
 210 215 220
 Ser Gly Ala Arg Arg Ala Lys Arg Lys Val Lys Arg Met Ile Leu Ile
 225 230 235 240
 Val Ala Ala Leu Phe Cys Leu Cys Trp Met Pro His His Ala Leu Ile
 245 250 255
 Leu Cys Val Trp Phe Gly Gln Phe Pro Leu Thr Arg Ala Thr Tyr Ala
 260 265 270

005040-60392860

Leu Arg Ile Leu Ser His Leu Val Ser Tyr Ala Asn Ser Cys Val Asn
 275 280 285
 Pro Ile Val Tyr Ala Leu Val Ser Lys His Phe Arg Lys Gly Phe Arg
 290 295 300
 Thr Ile Cys Ala Gly Leu Leu Gly Arg Ala Pro Gly Arg Ala Ser Gly
 305 310 315 320
 Arg Val Cys Ala Ala Ala Arg Gly Thr His Ser Gly Ser Val Leu Glu
 325 330 335
 Arg Glu Ser Ser Asp Leu Leu His Met Ser Glu Ala Ala Gly Ala Leu
 340 345 350
 Arg Pro Cys Pro Gly Ala Ser Gln Pro Cys Ile Leu Glu Pro Cys Pro
 355 360 365
 Gly Pro Ser Trp Gln Gly Pro Lys Ala Gly Asp Ser Ile Leu Thr Val
 370 375 380

Asp Val Ala
 385

<210> 506
 <211> 1401
 <212> DNA
 <213> Homo sapiens

<400> 506
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 cggtagcgca gggagtgccca ggagaccttg gcagccgagg aaccgccttc aggcctcgcc 180
 tgtaacgggt ccttcgatat gtacgtctgc tgggactatg ctgcacccaa tgccactgcc 240
 cgtgcgtcct gcccttggtta cctgccctgg caccaccatg tggctgcagg ttctgctctc 300
 cgccagtgtg gcagtgatgg ccaatgggga ctttgagag accatacaca atgtgagaac 360
 ccagagaaga atgaggcctt tctggaccaaa aggcctcatct tggagcgggt gcaggtcatg 420
 tacactgtcg gctactccct gtctctcgcc aactgtctgc tagccctgct catcttgagt 480
 ttgttcaggc ggctacattg cactagaaac tatatccaca tcaacctgtt cacgtctttc 540
 atgctgcgag ctgcggccat tctcagccga gaccgtctgc tacctcgacc tggccccctac 600
 cttggggacc aggccttgct gctgtggaac caggccctcg ctgcctgccg cacggcccag 660
 atcgtgaccc agtactgcgt gggtgccaac tacacgtggc tgctgggtga gggcgtctac 720
 ctgcacagtc tcttggtgct cgtgggaggc tccgaggagg gccacttccg ctactacctg 780
 ctctctgggt gggggggccc cgcgcttttc gtcattccct gggatgatcg caggtacctg 840
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 acccccatcc tcatgaccat cttgattaat ttctcattt ttatccgcat tcttggcatt 960
 ctctgttcca agctgaggac acggcaaatg cgctgcccgg attaccggct gaggtgggt 1020
 cgctccccgc tgacgtgggt gccctgctg ggtgtccacg aggtgggtgt tgctcccgtg 1080
 acagaggaac aggcgggggg cgccctgcgc ttgcgaagc tcggctttga gatcttctc 1140
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 tcggagatcc gccgtggctg gcaccactgc cgctgcgccc gcagcctggg cgaggagcaa 1260
 cggcagctcc cggagcgcgc cttccgggccc ctgccttccg gctccggccc gggcgaggtc 1320
 cccaccagcc gcggcttgct ctcggggacc ctcccagggc ctggggaatga ggccagccgg 1380
 gagttggaaa gttactgcta g 1401

<210> 507
 <211> 466
 <212> PRT
 <213> Homo sapiens

<400> 507

Met	Thr	Thr	Ser	Pro	Ile	Leu	Gln	Leu	Leu	Leu	Arg	Leu	Ser	Leu	Cys
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Gly	Leu	Leu	Leu	Gln	Arg	Ala	Glu	Thr	Gly	Ser	Lys	Gly	Gln	Thr	Ala
			20					25					30		
Gly	Glu	Leu	Tyr	Gln	Arg	Trp	Glu	Arg	Tyr	Arg	Arg	Glu	Cys	Gln	Glu
		35					40					45			
Thr	Leu	Ala	Ala	Ala	Glu	Pro	Pro	Ser	Gly	Leu	Ala	Cys	Asn	Gly	Ser
	50					55					60				
Phe	Asp	Met	Tyr	Val	Cys	Trp	Asp	Tyr	Ala	Ala	Pro	Asn	Ala	Thr	Ala
65					70					75					80
Arg	Ala	Ser	Cys	Pro	Trp	Tyr	Leu	Pro	Trp	His	His	His	Val	Ala	Ala
				85					90					95	
Gly	Phe	Val	Leu	Arg	Gln	Cys	Gly	Ser	Asp	Gly	Gln	Trp	Gly	Leu	Trp
			100					105					110		
Arg	Asp	His	Thr	Gln	Cys	Glu	Asn	Pro	Glu	Lys	Asn	Glu	Ala	Phe	Leu
		115					120					125			
Asp	Gln	Arg	Leu	Ile	Leu	Glu	Arg	Leu	Gln	Val	Met	Tyr	Thr	Val	Gly
	130					135					140				
Tyr	Ser	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Leu	Ala	Leu	Leu	Ile	Leu	Ser
145					150					155					160
Leu	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	His	Ile	Asn	Leu
				165					170					175	
Phe	Thr	Ser	Phe	Met	Leu	Arg	Ala	Ala	Ala	Ile	Leu	Ser	Arg	Asp	Arg
			180					185					190		
Leu	Leu	Pro	Arg	Pro	Gly	Pro	Tyr	Leu	Gly	Asp	Gln	Ala	Leu	Ala	Leu
		195					200					205			
Trp	Asn	Gln	Ala	Leu	Ala	Ala	Cys	Arg	Thr	Ala	Gln	Ile	Val	Thr	Gln
	210					215					220				
Tyr	Cys	Val	Gly	Ala	Asn	Tyr	Thr	Trp	Leu	Leu	Val	Glu	Gly	Val	Tyr
225					230					235					240
Leu	His	Ser	Leu	Leu	Val	Leu	Val	Gly	Gly	Ser	Glu	Glu	Gly	His	Phe
			245						250					255	
Arg	Tyr	Tyr	Leu	Leu	Leu	Gly	Trp	Gly	Ala	Pro	Ala	Leu	Phe	Val	Ile
			260					265					270		

Pro Trp Val Ile Val Arg Tyr Leu Tyr Glu Asn Thr Gln Cys Trp Glu
275 280 285

Arg Asn Glu Val Lys Ala Ile Trp Trp Ile Ile Arg Thr Pro Ile Leu
290 295 300

Met Thr Ile Leu Ile Asn Phe Leu Ile Phe Ile Arg Ile Leu Gly Ile
305 310 315 320

Leu Leu Ser Lys Leu Arg Thr Arg Gln Met Arg Cys Arg Asp Tyr Arg
325 330 335

Leu Arg Leu Ala Arg Ser Pro Leu Thr Leu Val Pro Leu Leu Gly Val
340 345 350

His Glu Val Val Phe Ala Pro Val Thr Glu Glu Gln Ala Arg Gly Ala
355 360 365

Leu Arg Phe Ala Lys Leu Gly Phe Glu Ile Phe Leu Ser Ser Phe Gln
370 375 380

Gly Phe Leu Val Ser Val Leu Tyr Cys Phe Ile Asn Lys Glu Val Gln
385 390 395 400

Ser Glu Ile Arg Arg Gly Trp His His Cys Arg Leu Arg Arg Ser Leu
405 410 415

Gly Glu Glu Gln Arg Gln Leu Pro Glu Arg Ala Phe Arg Ala Leu Pro
420 425 430

Ser Gly Ser Gly Pro Gly Glu Val Pro Thr Ser Arg Gly Leu Ser Ser
435 440 445

Gly Thr Leu Pro Gly Pro Gly Asn Glu Ala Ser Arg Glu Leu Glu Ser
450 455 460

Tyr Cys
465

<210> 508
<211> 1002
<212> DNA
<213> Homo sapiens

<400> 508
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gtgtttctcc tcagcctagt gggcaacagc ctggctcctgt gggctcctggt gaagtatgag 180
agcctggagt ccttcaccaa catcttcac ctaaacctgt gcctctcaga cctgggtgtc 240
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ctctgcaaac tcctcaatat gatcttctcc atcagcctct acagcagcat cttcttcctg 360
accatcatga ccatccaccg ctacctgtcg gtagtgagcc ccctctccac cctgcgcgtc 420
cccaccctcc gctgccgggt gctggtgacc atggctgtgt gggtagccag catcctgtcc 480
tccatcctcg acaccatctt ccacaagggt ctttcttcgg gctgtgatta ttccgaactc 540
acgtggtacc tcacctccgt ctaccagcac aacctcttct tctgtgtgtc cctggggatt 600

Lys Leu Ile Phe Ala Ile Val Val Ala Tyr Phe Leu Ser Trp Gly Pro
 225 230 235 240
 Tyr Asn Phe Thr Leu Phe Leu Gln Thr Leu Phe Arg Thr Gln Ile Ile
 245 250 255
 Arg Ser Cys Glu Ala Lys Gln Gln Leu Glu Tyr Ala Leu Leu Ile Cys
 260 265 270
 Arg Asn Leu Ala Phe Ser His Cys Cys Phe Asn Pro Val Leu Tyr Val
 275 280 285
 Phe Val Gly Val Lys Phe Arg Thr His Leu Lys His Val Leu Arg Gln
 290 295 300
 Phe Trp Phe Cys Arg Leu Gln Ala Pro Ser Pro Ala Ser Ile Pro His
 305 310 315 320
 Ser Pro Gly Ala Phe Ala Tyr Glu Gly Ala Ser Phe Tyr
 325 330

<210> 510
 <211> 1155
 <212> DNA
 <213> Homo sapiens

<400> 510
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 tatgtcatcc ctgcagttta tggggttatc attctgatag gcctcattgg caacatcact 180
 ttgatcaaga tcttctgtac agtcaagtcc atgcgaaacg ttccaaacct gttcatttcc 240
 agtctggctt tgggagacct gctcctccta ataacgtgtg ctccagtgga tgccagcagg 300
 tacctggctg acagatggct atttggcagg attggctgca aactgatccc ctttatacag 360
 cttacctctg ttggggtgtc tgtcttcaca ctcacggcgc tctcggcaga cagatacaaa 420
 gccattgtcc ggccaatgga tatccaggcc tcccatgccc tgatgaagat ctgcctcaaa 480
 gccgccttta tctggatcat ctccatgctg ctggccattc cagaggccgt gttttctgac 540
 ctccatccct tccatgagga aagcaccaac cagaccttca ttagctgtgc ccataccca 600
 cactctaatt agcttcaccc caaaatccat tctatggctt ctttctggt cttctacgtc 660
 atcccactgt cgatcatctc tgtttactac tacttcattg ctaaaaatct gatccagagt 720
 gcttacaatc ttcccgtgga agggaatata catgtcaaga agcagattga atcccgaag 780
 cgacttaaga agacagtgtc ggtgtttgtg ggctgttcg ctttctgctg gctccccaat 840
 catgtcatct acctgtaccg ctctaccac tactctgagg tggacacctc catgctccac 900
 tttgtcacca gcattctgtc ccgcctcctg gccttcacca actcctgcgt gaaccccttt 960
 gccctctacc tgctgagcaa gagtttcagg aaacagttca aactcagct gctctgttgc 1020
 cagcctggcc tgatcatccg gtctcacagc actggaagga gtacaacctg catgacctcc 1080
 ctcaagagta ccaaccctc cgtggccacc tttagcctca tcaatggaaa catctgtcac 1140
 gagcggtatg tctag 1155

<210> 511
 <211> 384
 <212> PRT
 <213> Homo sapiens

<400> 511
 Met Ala Leu Asn Asp Cys Phe Leu Leu Asn Leu Glu Val Asp His Phe

1	5	10	15
Met His Cys Asn Ile Ser Ser His Ser Ala Asp Leu Pro Val Asn Asp	20	25	30
Asp Trp Ser His Pro Gly Ile Leu Tyr Val Ile Pro Ala Val Tyr Gly	35	40	45
Val Ile Ile Leu Ile Gly Leu Ile Gly Asn Ile Thr Leu Ile Lys Ile	50	55	60
Phe Cys Thr Val Lys Ser Met Arg Asn Val Pro Asn Leu Phe Ile Ser	65	70	75
Ser Leu Ala Leu Gly Asp Leu Leu Leu Leu Ile Thr Cys Ala Pro Val	85	90	95
Asp Ala Ser Arg Tyr Leu Ala Asp Arg Trp Leu Phe Gly Arg Ile Gly	100	105	110
Cys Lys Leu Ile Pro Phe Ile Gln Leu Thr Ser Val Gly Val Ser Val	115	120	125
Phe Thr Leu Thr Ala Leu Ser Ala Asp Arg Tyr Lys Ala Ile Val Arg	130	135	140
Pro Met Asp Ile Gln Ala Ser His Ala Leu Met Lys Ile Cys Leu Lys	145	150	155
Ala Ala Phe Ile Trp Ile Ile Ser Met Leu Leu Ala Ile Pro Glu Ala	165	170	175
Val Phe Ser Asp Leu His Pro Phe His Glu Glu Ser Thr Asn Gln Thr	180	185	190
Phe Ile Ser Cys Ala Pro Tyr Pro His Ser Asn Glu Leu His Pro Lys	195	200	205
Ile His Ser Met Ala Ser Phe Leu Val Phe Tyr Val Ile Pro Leu Ser	210	215	220
Ile Ile Ser Val Tyr Tyr Tyr Phe Ile Ala Lys Asn Leu Ile Gln Ser	225	230	235
Ala Tyr Asn Leu Pro Val Glu Gly Asn Ile His Val Lys Lys Gln Ile	245	250	255
Glu Ser Arg Lys Arg Leu Lys Lys Thr Val Leu Val Phe Val Gly Leu	260	265	270
Phe Ala Phe Cys Trp Leu Pro Asn His Val Ile Tyr Leu Tyr Arg Ser	275	280	285
Tyr His Tyr Ser Glu Val Asp Thr Ser Met Leu His Phe Val Thr Ser	290	295	300
Ile Cys Ala Arg Leu Leu Ala Phe Thr Asn Ser Cys Val Asn Pro Phe			

305 310 315 320

Ala Leu Tyr Leu Leu Ser Lys Ser Phe Arg Lys Gln Phe Asn Thr Gln
325 330 335

Leu Leu Cys Cys Gln Pro Gly Leu Ile Ile Arg Ser His Ser Thr Gly
340 345 350

Arg Ser Thr Thr Cys Met Thr Ser Leu Lys Ser Thr Asn Pro Ser Val
355 360 365

Ala Thr Phe Ser Leu Ile Asn Gly Asn Ile Cys His Glu Arg Tyr Val
370 375 380

<210> 512
<211> 1422
<212> DNA
<213> Homo sapiens

<400> 512

atgaacactt	cagccccacc	tgctgtcagc	cccaacatca	ccgtcctggc	accaggaaag	60
gggtccctggc	aagtggcctt	cattgggata	accacggggc	tcctgtcgct	agccacagt	120
acaggcaacc	tgctggtact	catctctttc	aagggtcaaca	cggagctcaa	gacagtcaat	180
aactacttcc	tgctgagcct	ggcctgtgct	gacctcatca	tcggtacctt	ctccatgaac	240
ctctatacca	cgtacctgct	catggggcac	tgggctctgg	gcacgctggc	ttgtgacctc	300
tggctggccc	tggactatgt	ggccagcaat	gcctccgtca	tgaatctgct	gctcatcagc	360
tttgaccgct	acttctccgt	gactcggccc	ctgagctacc	gtgccaaagc	cacaccccg	420
cgggcagctc	tgatgatcgg	cctggcctgg	ctggtttcct	ttgtgctctg	ggccccagcc	480
atcctcttct	ggcagtacct	ggtaggggag	cggacgatgc	tagctgggca	gtgctacatc	540
cagttcctct	cccagcccat	catcaccttt	ggcacagcca	tggctgcctt	ctacctccct	600
gtcacagtca	tgtgcacgct	ctactggcgc	atctaccggg	agacagagaa	ccgagcacgg	660
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agctcccca	atacagtcaa	gaggccgact	aagaaagggc	gtgatcgagc	tggcaagggc	1020
cagaagcccc	gtggaaagga	gcagctggcc	aagcggaaga	ccttctcgct	ggtcaaggag	1080
aagaaggcga	aacggaccct	gagtgccatc	ctcctggcct	tcacctcac	ctggacaccg	1140
tacaacatca	tgggtgctgg	gtccaccttc	tgcaaggact	gtgttcccga	gacctgtgtg	1200
gagctgggct	actggctgtg	ctacgtcaac	agcaccatca	accccatgtg	ctacgcactc	1260
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tgatagtccc	ctctcctgca	tcctccacc	ccagtccccg	gg		1422

<210> 513
<211> 460
<212> PRT
<213> Homo sapiens

<400> 513

Met Asn Thr Ser Ala Pro Pro Ala Val Ser Pro Asn Ile Thr Val Leu

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Ala	Pro	Gly	Lys	Gly	Pro	Trp	Gln	Val	Ala	Phe	Ile	Gly	Ile	Thr	Thr				
			20				25						30						
Gly	Leu	Leu	Ser	Leu	Ala	Thr	Val	Thr	Gly	Asn	Leu	Leu	Val	Leu	Ile				
			35				40						45						
Ser	Phe	Lys	Val	Asn	Thr	Glu	Leu	Lys	Thr	Val	Asn	Asn	Tyr	Phe	Leu				
			50				55						60						
Leu	Ser	Leu	Ala	Cys	Ala	Asp	Leu	Ile	Ile	Gly	Thr	Phe	Ser	Met	Asn				
			65				70						75			80			
Leu	Tyr	Thr	Thr	Tyr	Leu	Leu	Met	Gly	His	Trp	Ala	Leu	Gly	Thr	Leu				
			85						90						95				
Ala	Cys	Asp	Leu	Trp	Leu	Ala	Leu	Asp	Tyr	Val	Ala	Ser	Asn	Ala	Ser				
			100						105						110				
Val	Met	Asn	Leu	Leu	Leu	Ile	Ser	Phe	Asp	Arg	Tyr	Phe	Ser	Val	Thr				
			115						120						125				
Arg	Pro	Leu	Ser	Tyr	Arg	Ala	Lys	Arg	Thr	Pro	Arg	Arg	Ala	Ala	Leu				
			130			135						140							
Met	Ile	Gly	Leu	Ala	Trp	Leu	Val	Ser	Phe	Val	Leu	Trp	Ala	Pro	Ala				
			145			150						155			160				
Ile	Leu	Phe	Trp	Gln	Tyr	Leu	Val	Gly	Glu	Arg	Thr	Met	Leu	Ala	Gly				
			165						170						175				
Gln	Cys	Tyr	Ile	Gln	Phe	Leu	Ser	Gln	Pro	Ile	Ile	Thr	Phe	Gly	Thr				
			180						185						190				
Ala	Met	Ala	Ala	Phe	Tyr	Leu	Pro	Val	Thr	Val	Met	Cys	Thr	Leu	Tyr				
			195						200						205				
Trp	Arg	Ile	Tyr	Arg	Glu	Thr	Glu	Asn	Arg	Ala	Arg	Glu	Leu	Ala	Ala				
			210			215						220							
Leu	Gln	Gly	Ser	Glu	Thr	Pro	Gly	Lys	Gly	Gly	Gly	Ser	Ser	Ser	Ser				
			225			230						235			240				
Ser	Glu	Arg	Ser	Gln	Pro	Gly	Ala	Glu	Gly	Ser	Pro	Glu	Thr	Pro	Pro				
			245						250						255				
Gly	Arg	Cys	Cys	Arg	Cys	Cys	Arg	Ala	Pro	Arg	Leu	Leu	Gln	Ala	Tyr				
			260						265						270				
Ser	Trp	Lys	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Gly	Ser	Met	Glu	Ser	Leu				
			275			280						285							
Thr	Ser	Ser	Glu	Gly	Glu	Glu	Pro	Gly	Ser	Glu	Val	Val	Ile	Lys	Met				
			290			295						300							
Pro	Met	Val	Asp	Pro	Glu	Ala	Gln	Ala	Pro	Thr	Lys	Gln	Pro	Pro	Arg				

305 310 315 320

Ser Ser Pro Asn Thr Val Lys Arg Pro Thr Lys Lys Gly Arg Asp Arg
325 330 335

Ala Gly Lys Gly Gln Lys Pro Arg Gly Lys Glu Gln Leu Ala Lys Arg
340 345 350

Lys Thr Phe Ser Leu Val Lys Glu Lys Lys Ala Lys Arg Thr Leu Ser
355 360 365

Ala Ile Leu Leu Ala Phe Ile Leu Thr Trp Thr Pro Tyr Asn Ile Met
370 375 380

Val Leu Val Ser Thr Phe Cys Lys Asp Cys Val Pro Glu Thr Leu Trp
385 390 395 400

Glu Leu Gly Tyr Trp Leu Cys Tyr Val Asn Ser Thr Ile Asn Pro Met
405 410 415

Cys Tyr Ala Leu Cys Asn Lys Ala Phe Arg Asp Thr Phe Arg Leu Leu
420 425 430

Leu Leu Cys Arg Trp Asp Lys Arg Arg Trp Arg Lys Ile Pro Lys Arg
435 440 445

Pro Gly Ser Val His Arg Thr Pro Ser Arg Gln Cys
450 455 460

<210> 514
<211> 1401
<212> DNA
<213> Homo sapiens

<400> 514

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tttgaagtgg tgtttattgt cctgggtggct ggatccctca gtttggtgac cattatcggg 120
aacatcctag tcatggtttc cattaaagtc aaccgccacc tccagaccgt caacaattac 180
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<211> 466
<212> PRT
<213> Homo sapiens

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35 40 45
Lys Val Asn Arg His Leu Gln Thr Val Asn Asn Tyr Phe Leu Phe Ser
50 55 60
Leu Ala Cys Ala Asp Leu Ile Ile Gly Val Phe Ser Met Asn Leu Tyr
65 70 75 80
Thr Leu Tyr Thr Val Ile Gly Tyr Trp Pro Leu Gly Pro Val Val Cys
85 90 95
Asp Leu Trp Leu Ala Leu Asp Tyr Val Val Ser Asn Ala Ser Val Met
100 105 110
Asn Leu Leu Ile Ile Ser Phe Asp Arg Tyr Phe Cys Val Thr Lys Pro
115 120 125
Leu Thr Tyr Pro Val Lys Arg Thr Thr Lys Met Ala Gly Met Met Ile
130 135 140
Ala Ala Ala Trp Val Leu Ser Phe Ile Leu Trp Ala Pro Ala Ile Leu
145 150 155 160
Phe Trp Gln Phe Ile Val Gly Val Arg Thr Val Glu Asp Gly Glu Cys
165 170 175
Tyr Ile Gln Phe Phe Ser Asn Ala Ala Val Thr Phe Gly Thr Ala Ile
180 185 190
Ala Ala Phe Tyr Leu Pro Val Ile Ile Met Thr Val Leu Tyr Trp His
195 200 205
Ile Ser Arg Ala Ser Lys Ser Arg Ile Lys Lys Asp Lys Lys Glu Pro
210 215 220
Val Ala Asn Gln Asp Pro Val Ser Pro Ser Leu Val Gln Gly Arg Ile
225 230 235 240
Val Lys Pro Asn Asn Asn Asn Met Pro Ser Ser Asp Asp Gly Leu Glu

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<210> 516
<211> 1773
<212> DNA
<213> Homo sapiens
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<210> 517
 <211> 590
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Phe Ser Ser Pro Asp Gly Thr Thr Asp Asp Pro Leu Gly Gly His Thr
 50 55 60
 Val Trp Gln Val Val Phe Ile Ala Phe Leu Thr Gly Ile Leu Ala Leu
 65 70 75 80
 Val Thr Ile Ile Gly Asn Ile Leu Val Ile Val Ser Phe Lys Val Asn
 85 90 95
 Lys Gln Leu Lys Thr Val Asn Asn Tyr Phe Leu Leu Ser Leu Ala Cys
 100 105 110
 Ala Asp Leu Ile Ile Gly Val Ile Ser Met Asn Leu Phe Thr Thr Tyr
 115 120 125
 Ile Ile Met Asn Arg Trp Ala Leu Gly Asn Leu Ala Cys Asp Leu Trp

130					135					140					
Leu	Ala	Ile	Asp	Tyr	Val	Ala	Ser	Asn	Ala	Ser	Val	Met	Asn	Leu	Leu
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Val	Ile	Ser	Phe	Asp	Arg	Tyr	Phe	Ser	Ile	Thr	Arg	Pro	Leu	Thr	Tyr
				165					170					175	
Arg	Ala	Lys	Arg	Thr	Thr	Lys	Arg	Ala	Gly	Val	Met	Ile	Gly	Leu	Ala
			180					185					190		
Trp	Val	Ile	Ser	Phe	Val	Leu	Trp	Ala	Pro	Ala	Ile	Leu	Phe	Trp	Gln
		195					200					205			
Tyr	Phe	Val	Gly	Lys	Arg	Thr	Val	Pro	Pro	Gly	Glu	Cys	Phe	Ile	Gln
	210					215					220				
Phe	Leu	Ser	Glu	Pro	Thr	Ile	Thr	Phe	Gly	Thr	Ala	Ile	Ala	Ala	Phe
225						230					235				240
Tyr	Met	Pro	Val	Thr	Ile	Met	Thr	Ile	Leu	Tyr	Trp	Arg	Ile	Tyr	Lys
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Glu	Thr	Glu	Lys	Arg	Thr	Lys	Glu	Leu	Ala	Gly	Leu	Gln	Ala	Ser	Gly
			260					265					270		
Thr	Glu	Ala	Glu	Thr	Glu	Asn	Phe	Val	His	Pro	Thr	Gly	Ser	Ser	Arg
		275					280					285			
Ser	Cys	Ser	Ser	Tyr	Glu	Leu	Gln	Gln	Gln	Ser	Met	Lys	Arg	Ser	Asn
	290					295					300				
Arg	Arg	Lys	Tyr	Gly	Arg	Cys	His	Phe	Trp	Phe	Thr	Thr	Lys	Ser	Trp
305						310					315				320
Lys	Pro	Ser	Ser	Glu	Gln	Met	Asp	Gln	Asp	His	Ser	Ser	Ser	Asp	Ser
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Trp	Asn	Asn	Asn	Asp	Ala	Ala	Ala	Ser	Leu	Glu	Asn	Ser	Ala	Ser	Ser
			340					345					350		
Asp	Glu	Glu	Asp	Ile	Gly	Ser	Glu	Thr	Arg	Ala	Ile	Tyr	Ser	Ile	Val
		355					360					365			
Leu	Lys	Leu	Pro	Gly	His	Ser	Thr	Ile	Leu	Asn	Ser	Thr	Lys	Leu	Pro
	370					375					380				
Ser	Ser	Asp	Asn	Leu	Gln	Val	Pro	Glu	Glu	Glu	Leu	Gly	Met	Val	Asp
385						390					395				400
Leu	Glu	Arg	Lys	Ala	Asp	Lys	Leu	Gln	Ala	Gln	Lys	Ser	Val	Asp	Asp
				405					410					415	
Gly	Gly	Ser	Phe	Pro	Lys	Ser	Phe	Ser	Lys	Leu	Pro	Ile	Gln	Leu	Glu
			420					425					430		
Ser	Ala	Val	Asp	Thr	Ala	Lys	Thr	Ser	Asp	Val	Asn	Ser	Ser	Val	Gly

435

440

445

Lys Ser Thr Ala Thr Leu Pro Leu Ser Phe Lys Glu Ala Thr Leu Ala
450 455 460

Lys Arg Phe Ala Leu Lys Thr Arg Ser Gln Ile Thr Lys Arg Lys Arg
465 470 475 480

Met Ser Leu Val Lys Glu Lys Lys Ala Lys Gln Thr Leu Ser Ala Ile
485 490 495

Leu Leu Ala Phe Ile Ile Thr Trp Thr Pro Tyr Asn Ile Met Val Leu
500 505 510

Val Asn Thr Phe Cys Asp Ser Cys Ile Pro Lys Thr Phe Trp Asn Leu
515 520 525

Gly Tyr Trp Leu Cys Tyr Ile Asn Ser Thr Val Asn Pro Val Cys Tyr
530 535 540

Ala Leu Cys Asn Lys Thr Phe Arg Thr Thr Phe Lys Met Leu Leu Leu
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Cys Gln Cys Asp Lys Lys Lys Arg Arg Lys Gln Gln Tyr Gln Gln Arg
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<210> 518

<211> 1440

<212> DNA

<213> Homo sapiens

<400> 518

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<210> 519
 <211> 479
 <212> PRT
 <213> Homo sapiens

<400> 519
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 Val Phe Ile Ala Thr Val Thr Gly Ser Leu Ser Leu Val Thr Val Val
 35 40 45
 Gly Asn Ile Leu Val Met Leu Ser Ile Lys Val Asn Arg Gln Leu Gln
 50 55 60
 Thr Val Asn Asn Tyr Phe Leu Phe Ser Leu Ala Cys Ala Asp Leu Ile
 65 70 75 80
 Ile Gly Ala Phe Ser Met Asn Leu Tyr Thr Val Tyr Ile Ile Lys Gly
 85 90 95
 Tyr Trp Pro Leu Gly Ala Val Val Cys Asp Leu Trp Leu Ala Leu Asp
 100 105 110
 Tyr Val Val Ser Asn Ala Ser Val Met Asn Leu Leu Ile Ile Ser Phe
 115 120 125
 Asp Arg Tyr Phe Cys Val Thr Lys Pro Leu Thr Tyr Pro Ala Arg Arg
 130 135 140
 Thr Thr Lys Met Ala Gly Leu Met Ile Ala Ala Ala Trp Val Leu Ser
 145 150 155 160
 Phe Val Leu Trp Ala Pro Ala Ile Leu Phe Trp Gln Phe Val Val Gly
 165 170 175
 Lys Arg Thr Val Pro Asp Asn Gln Cys Phe Ile Gln Phe Leu Ser Asn
 180 185 190
 Pro Ala Val Thr Phe Gly Thr Ala Ile Ala Ala Phe Tyr Leu Pro Val
 195 200 205
 Val Ile Met Thr Val Leu Tyr Ile His Ile Ser Leu Ala Ser Arg Ser
 210 215 220
 Arg Val His Lys His Arg Pro Glu Gly Pro Lys Glu Lys Lys Ala Lys
 225 230 235 240
 Thr Leu Ala Phe Leu Lys Ser Pro Leu Met Lys Gln Ser Val Lys Lys

09830-0450-60592860

0925509-040504

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		275					280					285			
Asp	Lys	Asp	Thr	Ser	Asn	Glu	Ser	Ser	Ser	Gly	Ser	Ala	Thr	Gln	Asn
	290					295					300				
Thr	Lys	Glu	Arg	Pro	Ala	Thr	Glu	Leu	Ser	Thr	Thr	Glu	Ala	Thr	Thr
305					310					315					320
Pro	Ala	Met	Pro	Ala	Pro	Pro	Leu	Gln	Pro	Arg	Ala	Leu	Asn	Pro	Ala
				325					330					335	
Ser	Arg	Trp	Ser	Lys	Ile	Gln	Ile	Val	Thr	Lys	Gln	Thr	Gly	Asn	Glu
			340					345					350		
Cys	Val	Thr	Ala	Ile	Glu	Ile	Val	Pro	Ala	Thr	Pro	Ala	Gly	Met	Arg
		355					360					365			
Pro	Ala	Ala	Asn	Val	Ala	Arg	Lys	Phe	Ala	Ser	Ile	Ala	Arg	Asn	Gln
	370					375					380				
Val	Arg	Lys	Lys	Arg	Gln	Met	Ala	Ala	Arg	Glu	Arg	Lys	Val	Lys	Arg
385					390					395					400
Thr	Ile	Phe	Ala	Ile	Leu	Leu	Ala	Phe	Ile	Leu	Thr	Trp	Thr	Pro	Tyr
				405					410					415	
Asn	Val	Met	Val	Leu	Val	Asn	Thr	Phe	Cys	Gln	Ser	Cys	Ile	Pro	Asp
			420					425					430		
Thr	Val	Trp	Ser	Ile	Gly	Tyr	Trp	Leu	Cys	Tyr	Val	Asn	Ser	Thr	Ile
		435					440					445			
Asn	Pro	Ala	Cys	Tyr	Ala	Leu	Cys	Asn	Ala	Thr	Phe	Lys	Lys	Thr	Phe
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<210> 520
 <211> 1599
 <212> DNA
 <213> Homo sapiens

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<210> 521
<211> 532
<212> PRT
<213> Homo sapiens

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<400> 521
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Ile Ala Ala Val Thr Ala Val Val Ser Leu Ile Thr Ile Val Gly Asn
          35                      40                      45

Val Leu Val Met Ile Ser Phe Lys Val Asn Ser Gln Leu Lys Thr Val
          50                      55                      60

Asn Asn Tyr Tyr Leu Leu Ser Leu Ala Cys Ala Asp Leu Ile Ile Gly
          65                      70                      75                      80

Ile Phe Ser Met Asn Leu Tyr Thr Thr Tyr Ile Leu Met Gly Arg Trp
          85                      90                      95

Ala Leu Gly Ser Leu Ala Cys Asp Leu Trp Leu Ala Leu Asp Tyr Val
          100                      105                      110

Ala Ser Asn Ala Ser Val Met Asn Leu Leu Val Ile Ser Phe Asp Arg
          115                      120                      125

Tyr Phe Ser Ile Thr Arg Pro Leu Thr Tyr Arg Ala Lys Arg Thr Pro
          130                      135                      140

Lys Arg Ala Gly Ile Met Ile Gly Leu Ala Trp Leu Ile Ser Phe Ile

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145		150		155		160
Leu Trp Ala Pro	Ala Ile Leu Cys Trp	Gln Tyr Leu Val Gly Lys Arg				
	165	170			175	
Thr Val Pro Leu	Asp Glu Cys Gln Ile Gln Phe Leu Ser	Glu Pro Thr				
	180	185			190	
Ile Thr Phe Gly Thr	Ala Ile Ala Ala Phe Tyr Ile Pro Val Ser Val					
	195	200			205	
Met Thr Ile Leu Tyr Cys Arg	Ile Tyr Arg Glu Thr Glu Lys Arg Thr					
	210	215			220	
Lys Asp Leu Ala Asp Leu Gln Gly Ser Asp Ser	Val Thr Lys Ala Glu					
	225	230			235	240
Lys Arg Lys Pro Ala His Arg Ala Leu Phe Arg Ser Cys Leu Arg Cys						
	245	250			255	
Pro Arg Pro Thr Leu Ala Gln Arg Glu Arg Asn Gln Ala Ser Trp Ser						
	260	265			270	
Ser Ser Arg Arg Ser Thr Ser Thr Thr Gly Lys Pro Ser Gln Ala Thr						
	275	280			285	
Gly Pro Ser Ala Asn Trp Ala Lys Ala Glu Gln Leu Thr Thr Cys Ser						
	290	295			300	
Ser Tyr Pro Ser Ser Glu Asp Glu Asp Lys Pro Ala Thr Asp Pro Val						
	305	310			315	320
Leu Gln Val Val Tyr Lys Ser Gln Gly Lys Glu Ser Pro Gly Glu Glu						
	325	330			335	
Phe Ser Ala Glu Glu Thr Glu Glu Thr Phe Val Lys Ala Glu Thr Glu						
	340	345			350	
Lys Ser Asp Tyr Asp Thr Pro Asn Tyr Leu Leu Ser Pro Ala Ala Ala						
	355	360			365	
His Arg Pro Lys Ser Gln Lys Cys Val Ala Tyr Lys Phe Arg Leu Val						
	370	375			380	
Val Lys Ala Asp Gly Asn Gln Glu Thr Asn Asn Gly Cys His Lys Val						
	385	390			395	400
Lys Ile Met Pro Cys Pro Phe Pro Val Ala Lys Glu Pro Ser Thr Lys						
	405	410			415	
Gly Leu Asn Pro Asn Pro Ser His Gln Met Thr Lys Arg Lys Arg Val						
	420	425			430	
Val Leu Val Lys Glu Arg Lys Ala Lys Gln Thr Leu Ser Ala Ile Leu						
	435	440			445	
Leu Ala Phe Ile Ile Thr Trp Thr Pro Tyr Asn Ile Met Val Leu Val						

450

455

460

Ser Thr Phe Cys Asp Lys Cys Val Pro Val Thr Leu Trp His Leu Gly
 465 470 475 480

Tyr Trp Leu Cys Tyr Val Asn Ser Thr Val Asn Pro Ile Cys Tyr Ala
 485 490 495

Leu Cys Asn Arg Thr Phe Arg Lys Thr Phe Lys Met Leu Leu Leu Cys
 500 505 510

Arg Trp Lys Lys Lys Lys Val Glu Glu Lys Leu Tyr Trp Gln Gly Asn
 515 520 525

Ser Lys Leu Pro
 530

<210> 522

<211> 972

<212> DNA

<213> Homo sapiens

<400> 522

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<211> 323

<212> PRT

<213> Homo sapiens

<400> 523

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 35 40 45

60532360

Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val Ile Leu Ala Val Val
50 55 60

Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe Phe Leu Cys Ser Leu
65 70 75 80

Ala Val Ala Asp Met Leu Val Ser Val Ser Asn Ala Leu Glu Thr Ile
85 90 95

Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr Phe Glu Asp Gln Phe
100 105 110

Ile Gln His Met Asp Asn Ile Phe Asp Ser Met Ile Cys Ile Ser Leu
115 120 125

Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala Val Asp Arg Tyr Val
130 135 140

Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Met Thr Val Arg Lys
145 150 155 160

Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys Cys Gly Val Cys Gly
165 170 175

Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met Val Ile Val Cys Leu
180 185 190

Ile Thr Met Phe Phe Ala Met Met Leu Leu Met Gly Thr Leu Tyr Val
195 200 205

His Met Phe Leu Phe Ala Arg Leu His Val Lys Arg Ile Ala Ala Leu
210 215 220

Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His Ser Cys Met Lys Gly
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Lys Val Thr Ile Thr Ile Leu Leu Gly Val Phe Ile Phe Cys Trp Ala
245 250 255

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260 265 270

Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr Tyr Leu Val Leu Ile
275 280 285

Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr Ala Phe Arg Ser Leu
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Asn Leu Gly

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 35 40 45
 Gly Asn Val Val Val Met Trp Ile Ile Leu Ala His Lys Arg Met Arg
 50 55 60
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 65 70 75 80
 Met Ala Ala Phe Asn Thr Val Val Asn Phe Thr Tyr Ala Val His Asn
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 35 40 45
 Thr Gly Asn Ala Ile Val Ile Trp Ile Ile Leu Ala His Arg Arg Met
 50 55 60
 Arg Thr Val Thr Asn Tyr Phe Ile Val Asn Leu Ala Leu Ala Asp Leu
 65 70 75 80
 Cys Met Ala Ala Phe Asn Ala Ala Phe Asn Phe Val Tyr Ala Ser His
 85 90 95
 Asn Ile Trp Tyr Phe Gly Arg Ala Phe Cys Tyr Phe Gln Asn Leu Phe
 100 105 110
 Pro Ile Thr Ala Met Phe Val Ser Ile Tyr Ser Met Thr Ala Ile Ala
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005040-605280

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Ala	Leu	Ala	Ser	Pro	Gln	Cys	Phe	Tyr	Ser	Thr	Val	Thr	Met	Asp	Gln	165	170	175
Gly	Ala	Thr	Lys	Cys	Val	Val	Ala	Trp	Pro	Glu	Asp	Ser	Gly	Gly	Lys	180	185	190
Thr	Leu	Leu	Leu	Tyr	His	Leu	Val	Val	Ile	Ala	Leu	Ile	Tyr	Phe	Leu	195	200	205
Pro	Leu	Ala	Val	Met	Phe	Val	Ala	Tyr	Ser	Val	Ile	Gly	Leu	Thr	Leu	210	215	220
Trp	Arg	Arg	Ala	Val	Pro	Gly	His	Gln	Ala	His	Gly	Ala	Asn	Leu	Arg	225	230	235
His	Leu	Gln	Ala	Lys	Lys	Lys	Phe	Lys	Lys	Thr	Met	Val	Leu	Val	Val	245	250	255
Leu	Thr	Phe	Ala	Ile	Cys	Trp	Leu	Pro	Tyr	His	Leu	Tyr	Phe	Ile	Leu	260	265	270
Gly	Ser	Phe	Gln	Glu	Asp	Ile	Tyr	Cys	His	Lys	Phe	Ile	Gln	Gln	Val	275	280	285
Tyr	Leu	Ala	Leu	Phe	Trp	Leu	Ala	Met	Ser	Ser	Thr	Met	Tyr	Asn	Pro	290	295	300
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Ala	Phe	Arg	Cys	Cys	Pro	Trp	Val	Thr	Pro	Thr	Lys	Glu	Asp	Lys	Leu	325	330	335
Glu	Leu	Thr	Pro	Thr	Thr	Ser	Leu	Ser	Thr	Arg	Val	Asn	Arg	Cys	His	340	345	350
Thr	Lys	Glu	Thr	Leu	Phe	Met	Ala	Gly	Asp	Thr	Ala	Pro	Ser	Glu	Ala	355	360	365
Thr	Ser	Gly	Glu	Ala	Gly	Arg	Pro	Gln	Asp	Gly	Ser	Gly	Leu	Trp	Phe	370	375	380
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 <211> 1398
 <212> DNA
 <213> Homo sapiens

<400> 528

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<211> 465

<212> PRT

<213> Homo sapiens

<400> 529

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Ala Thr Gly Ala Val Glu Thr Gly Trp Leu Gln Leu Leu Asp Gln Ala
    35                      40                      45

Gly Asn Leu Ser Ser Ser Pro Ser Ala Leu Gly Leu Pro Val Ala Ser
    50                      55                      60

Pro Ala Pro Ser Gln Pro Trp Ala Asn Leu Thr Asn Gln Phe Val Gln
    65                      70                      75                      80

Pro Ser Trp Arg Ile Ala Leu Trp Ser Leu Ala Tyr Gly Val Val Val
    85                      90                      95

Ala Val Ala Val Leu Gly Asn Leu Ile Val Ile Trp Ile Ile Leu Ala
    100                     105                     110

His Lys Arg Met Arg Thr Val Thr Asn Tyr Phe Leu Val Asn Leu Ala
    115                     120                     125

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Phe	Ser	Asp	Ala	Ser	Met	Ala	Ala	Phe	Asn	Thr	Leu	Val	Asn	Phe	Ile	130	135	140
Tyr	Ala	Leu	His	Ser	Glu	Trp	Tyr	Phe	Gly	Ala	Asn	Tyr	Cys	Arg	Phe	145	150	155
Gln	Asn	Phe	Phe	Pro	Ile	Thr	Ala	Val	Phe	Ala	Ser	Ile	Tyr	Ser	Met	165	170	175
Thr	Ala	Ile	Ala	Val	Asp	Arg	Tyr	Met	Ala	Ile	Ile	Asp	Pro	Leu	Lys	180	185	190
Pro	Arg	Leu	Ser	Ala	Thr	Ala	Thr	Lys	Ile	Val	Ile	Gly	Ser	Ile	Trp	195	200	205
Ile	Leu	Ala	Phe	Leu	Leu	Ala	Phe	Pro	Gln	Cys	Leu	Tyr	Ser	Lys	Thr	210	215	220
Lys	Val	Met	Pro	Gly	Arg	Thr	Leu	Cys	Phe	Val	Gln	Trp	Pro	Glu	Gly	225	230	235
Pro	Lys	Gln	His	Phe	Thr	Tyr	His	Ile	Ile	Val	Ile	Ile	Leu	Val	Tyr	245	250	255
Cys	Phe	Pro	Leu	Leu	Ile	Met	Gly	Ile	Thr	Tyr	Thr	Ile	Val	Gly	Ile	260	265	270
Thr	Leu	Trp	Gly	Gly	Glu	Ile	Pro	Gly	Asp	Thr	Cys	Asp	Lys	Tyr	His	275	280	285
Glu	Gln	Leu	Lys	Ala	Lys	Arg	Lys	Val	Lys	Lys	Met	Met	Ile	Ile	Val	290	295	300
Val	Met	Thr	Phe	Ala	Ile	Cys	Trp	Leu	Pro	Tyr	His	Ile	Tyr	Phe	Ile	305	310	315
Leu	Thr	Ala	Ile	Tyr	Gln	Gln	Leu	Asn	Arg	Trp	Lys	Tyr	Ile	Gln	Gln	325	330	335
Val	Tyr	Leu	Ala	Ser	Phe	Trp	Leu	Ala	Met	Ser	Ser	Thr	Met	Tyr	Asn	340	345	350
Pro	Ile	Ile	Tyr	Cys	Cys	Leu	Asn	Lys	Arg	Phe	Arg	Ala	Gly	Phe	Lys	355	360	365
Arg	Ala	Phe	Arg	Trp	Cys	Pro	Phe	Ile	Lys	Val	Ser	Ser	Tyr	Asp	Glu	370	375	380
Leu	Glu	Leu	Lys	Thr	Thr	Arg	Phe	His	Pro	Asn	Arg	Gln	Ser	Ser	Met	385	390	395
Tyr	Thr	Val	Thr	Arg	Met	Glu	Ser	Met	Thr	Val	Val	Phe	Asp	Pro	Asn	405	410	415
Asp	Ala	Asp	Thr	Thr	Arg	Ser	Ser	Arg	Lys	Lys	Arg	Ala	Thr	Pro	Arg	420	425	430

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 <213> Homo sapiens

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 35 40 45
 Leu Tyr Leu Leu Ile Ile Thr Val Gly Leu Leu Gly Asn Ile Met Leu
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0982609-094709

370

375

380

Lys Gln Glu Met Ala Met
385 390

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<212> PRT
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35 40 45
Thr Phe Val Ser Leu Leu Gly Phe Met Gly Asn Leu Leu Ile Leu Met
50 55 60
Ala Leu Met Lys Lys Arg Asn Gln Lys Thr Thr Val Asn Phe Leu Ile
65 70 75 80

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His Leu Phe His Val Val Thr Asp Phe Asn Asp Asn Leu Ile Ser Asn
385 390 395 400

Arg His Phe Lys Leu Val Tyr Cys Ile Cys His Leu Leu Gly Met Met
405 410 415

Ser Cys Cys Leu Asn Pro Ile Leu Tyr Gly Phe Leu Asn Asn Gly Ile
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Lys Ala Asp Leu Val Ser Leu Ile His Cys Leu His Met
435 440 445

<210> 534
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<212> DNA
<213> Homo sapiens

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tgccgcggct actacttctt gcgcgacgcc tgcacctacg ccacggccct caacgtggcc 480
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accttcatgt ccttcatatt ccccatggtg gtcattctcg tcctgaacac catcatcgcc 780
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cccattcgtt acaacctcgt ctctgccaac tccgccaca tcttcttggc cacactggcc 1140
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<210> 535
<211> 418
<212> PRT
<213> Homo sapiens

<400> 535
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Asp Pro Phe Gln Arg Ala Gln Ala Gly Leu Glu Glu Ala Leu Leu Ala
20 25 30
Pro Gly Phe Gly Asn Ala Ser Gly Asn Ala Ser Glu Arg Val Leu Ala
35 40 45

Ala	Pro	Ser	Ser	Glu	Leu	Asp	Val	Asn	Thr	Asp	Ile	Tyr	Ser	Lys	Val
	50					55					60				
Leu	Val	Thr	Ala	Val	Tyr	Leu	Ala	Leu	Phe	Val	Val	Gly	Thr	Val	Gly
65					70					75					80
Asn	Thr	Val	Thr	Ala	Phe	Thr	Leu	Ala	Arg	Lys	Lys	Ser	Leu	Gln	Ser
				85					90					95	
Leu	Gln	Ser	Thr	Val	His	Tyr	His	Leu	Gly	Ser	Leu	Ala	Leu	Ser	Asp
			100					105					110		
Leu	Leu	Thr	Leu	Leu	Leu	Ala	Met	Pro	Val	Glu	Leu	Tyr	Asn	Phe	Ile
		115					120					125			
Trp	Val	His	His	Pro	Trp	Ala	Phe	Gly	Asp	Ala	Gly	Cys	Arg	Gly	Tyr
	130					135					140				
Tyr	Phe	Leu	Arg	Asp	Ala	Cys	Thr	Tyr	Ala	Thr	Ala	Leu	Asn	Val	Ala
145					150					155					160
Ser	Leu	Ser	Val	Glu	Arg	Tyr	Leu	Ala	Ile	Cys	His	Pro	Phe	Lys	Ala
				165					170					175	
Lys	Thr	Leu	Met	Ser	Arg	Ser	Arg	Thr	Lys	Lys	Phe	Ile	Ser	Ala	Ile
			180					185					190		
Trp	Leu	Ala	Ser	Ala	Leu	Leu	Thr	Val	Pro	Met	Leu	Phe	Thr	Met	Gly
		195					200					205			
Glu	Gln	Asn	Arg	Ser	Ala	Asp	Gly	Gln	His	Ala	Gly	Gly	Leu	Val	Cys
	210					215					220				
Thr	Pro	Thr	Ile	His	Thr	Ala	Thr	Val	Lys	Val	Val	Ile	Gln	Val	Asn
225					230					235					240
Thr	Phe	Met	Ser	Phe	Ile	Phe	Pro	Met	Val	Val	Ile	Ser	Val	Leu	Asn
				245					250					255	
Thr	Ile	Ile	Ala	Asn	Lys	Leu	Thr	Val	Met	Val	Arg	Gln	Ala	Ala	Glu
			260					265					270		
Gln	Gly	Gln	Val	Cys	Thr	Val	Gly	Gly	Glu	His	Ser	Thr	Phe	Ser	Met
		275					280					285			
Ala	Ile	Glu	Pro	Gly	Arg	Val	Gln	Ala	Leu	Arg	His	Gly	Lys	Arg	Val
	290					295					300				
Leu	Arg	Ala	Val	Val	Ile	Ala	Phe	Val	Val	Cys	Trp	Leu	Pro	Tyr	His
305					310					315					320
Val	Arg	Arg	Leu	Met	Phe	Cys	Tyr	Ile	Ser	Asp	Glu	Gln	Trp	Thr	Pro
				325					330					335	
Phe	Leu	Tyr	Asp	Phe	Tyr	His	Tyr	Phe	Tyr	Met	Val	Thr	Asn	Ala	Leu
			340					345					350		

Phe Tyr Val Ser Ser Thr Ile Asn Pro Ile Leu Tyr Asn Leu Val Ser
 355 360 365

Ala Asn Phe Arg His Ile Phe Leu Ala Thr Leu Ala Cys Leu Cys Pro
 370 375 380

Val Trp Arg Arg Arg Arg Lys Arg Pro Ala Phe Ser Arg Lys Ala Asp
 385 390 395 400

Ser Val Ser Ser Asn His Thr Leu Ser Ser Asn Ala Thr Arg Glu Thr
 405 410 415

Leu Tyr

<210> 536
 <211> 1233
 <212> DNA
 <213> Homo sapiens

<400> 536
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 ctcatctggg cgctggggcg ggcgggcaat gcgctgtccg tgcacgtggg gctgaaggcg 180
 cgggcccgggc gcgcggggcg cctgcgccac cacgtgctca gcctggcgct cgcgggcgctg 240
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 gccacggtgc tgagcgtggc aggcctgagc gccgagcgct gcctagccgt gtgccagccc 420
 ctgcgtgccc gcagcctgct gacgccacgc cggaccgggt ggctgggtggc gctctcgtgg 480
 gccgcctcgc tcggcctcgc cctgcccattg gccgtcatca tggggcagaa gcacgaactc 540
 gagacggcgg acggggagcc ggagcccgc tcgcgagtgt gcacggtgct ggtgagccgc 600
 accgcgtccc aagtctttat ccagggtgaat gtgctgggtgt ccttcgtgct ccccttggca 660
 ctaactgctt tcctgaatgg ggtcacagt agccacctgc tggccctctg ctcccaagt 720
 ccgtccactt ctaccccggg cagctccacc cccagccgcc tggagctgct gactgaggag 780
 ggtctcctca gcttcacgt atggaagaag acctttatcc agggaggcca ggtcagcctg 840
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<210> 537
 <211> 410
 <212> PRT
 <213> Homo sapiens

<400> 537
 Met Glu Thr Ser Ser Pro Arg Pro Pro Arg Pro Ser Ser Asn Pro Gly
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 Leu Ser Leu Asp Ala Arg Leu Gly Val Asp Thr Arg Leu Trp Ala Lys
 20 25 30

His Tyr Phe Tyr Met Val Thr Asn Thr Leu Phe Tyr Val Ser Ser Ala
340 345 350

Val Thr Pro Leu Leu Tyr Asn Ala Val Ser Ser Ser Phe Arg Lys Leu
355 360 365

Phe Leu Glu Ala Val Ser Ser Leu Cys Gly Glu His His Pro Met Lys
370 375 380

Arg Leu Pro Pro Lys Pro Gln Ser Pro Thr Leu Met Asp Thr Ala Ser
385 390 395 400

Gly Phe Gly Asp Pro Pro Glu Thr Arg Thr
405 410

<210> 538
<211> 1119
<212> DNA
<213> Homo sapiens

<400> 538
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gacgcctacc ctagegcctt cccagcgct ggcgccaatg cgtcggggccc gccaggaccg 120
gggagcgctt cgtccctcgc cctggcaatc gccatcaccg cgctctactc ggccgtgtgc 180
gccgtggggc tgctgggcaa cgtgcttgct atgttcggca tcgtccggta cactaagatg 240
aagacggcca ccaacatcta catcttcaac ctggccttag ccgatgcgct ggccaccagc 300
acgctgcctt tccagagtgc caagtacctg atggagacgt ggcccttcgg cgagctgctc 360
tgcaaggctg tgctctccat cgactactac aatatgttca ccagcatctt cacgctcacc 420
atgatgagtg ttgaccgcta catcgctgtc tgccaccctg tcaaggccct ggacttccgc 480
acgcctgcc aaggccaagct gatcaacatc tgtatctggg tcctggcctc aggcgttggc 540
gtgcccatac tggatcatggc tgtgaccgct ccccgggacg gtgcagtggg gtgcatgctc 600
cagttcccca gcccagctg gtactgggac acggtgacca agatctgcgt gttcctcttc 660
gccttcgtgg tgcccatcct catcatcacc gtgtgctatg gcctcatgct gctgcgcctg 720
cgcatgtgtc gcctgctgtc gggctccaag gagaaggacc gcagcctgcg gcgcatcaag 780
cgcatggtgc tgggtggtgt gggcgccctc gtggtgtgtt gggcgcccat ccacatcttc 840
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cacctgtgca tcgcgtggg ctacgccaat agcagcctca acccggtgct ctacgctttc 960
ctcgacgaga acttcaagcg ctgcttccgc cagctctgcc gcaagccctg cggcgcccca 1020
gacccagca gcttcagcgg gcccgcgaa gccacggccc gcgagcgtgt caccgcctgc 1080
acccgctccg atggtcccg cggtgccggt gccgcctga 1119

<210> 539
<211> 372
<212> PRT
<213> Homo sapiens

<400> 539
Met Glu Pro Ala Pro Ser Ala Gly Ala Glu Leu Gln Pro Pro Leu Phe
1 5 10 15

Ala Asn Ala Ser Asp Ala Tyr Pro Ser Ala Phe Pro Ser Ala Gly Ala
20 25 30

Asn Ala Ser Gly Pro Pro Gly Pro Gly Ser Ala Ser Ser Leu Ala Leu

09826509-040501

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Ala	Ile	Ala	Ile	Thr	Ala	Leu	Tyr	Ser	Ala	Val	Cys	Ala	Val	Gly	Leu
50					55					60					
Leu	Gly	Asn	Val	Leu	Val	Met	Phe	Gly	Ile	Val	Arg	Tyr	Thr	Lys	Met
65					70					75					80
Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	Asp	Ala
				85					90					95	
Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Ala	Lys	Tyr	Leu	Met	Glu
			100					105					110		
Thr	Trp	Pro	Phe	Gly	Glu	Leu	Leu	Cys	Lys	Ala	Val	Leu	Ser	Ile	Asp
		115					120					125			
Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val
	130					135					140				
Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg
145					150					155					160
Thr	Pro	Ala	Lys	Ala	Lys	Leu	Ile	Asn	Ile	Cys	Ile	Trp	Val	Leu	Ala
				165					170					175	
Ser	Gly	Val	Gly	Val	Pro	Ile	Met	Val	Met	Ala	Val	Thr	Arg	Pro	Arg
			180					185					190		
Asp	Gly	Ala	Val	Val	Cys	Met	Leu	Gln	Phe	Pro	Ser	Pro	Ser	Trp	Tyr
		195					200					205			
Trp	Asp	Thr	Val	Thr	Lys	Ile	Cys	Val	Phe	Leu	Phe	Ala	Phe	Val	Val
	210					215					220				
Pro	Ile	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Leu	Leu	Arg	Leu
225					230					235					240
Arg	Ser	Val	Arg	Leu	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp	Arg	Ser	Leu
				245					250					255	
Arg	Arg	Ile	Lys	Arg	Met	Val	Leu	Val	Val	Val	Gly	Ala	Phe	Val	Val
			260					265					270		
Cys	Trp	Ala	Pro	Ile	His	Ile	Phe	Val	Ile	Val	Trp	Thr	Leu	Val	Asp
		275					280					285			
Ile	Asp	Arg	Arg	Asp	Pro	Leu	Val	Val	Ala	Ala	Leu	His	Leu	Cys	Ile
	290					295					300				
Ala	Leu	Gly	Tyr	Ala	Asn	Ser	Ser	Leu	Asn	Pro	Val	Leu	Tyr	Ala	Phe
305					310					315					320
Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Gln	Leu	Cys	Arg	Lys	Pro
				325					330					335	
Cys	Gly	Arg	Pro	Asp	Pro	Ser	Ser	Phe	Ser	Arg	Pro	Arg	Glu	Ala	Thr

340

345

350

Ala Arg Glu Arg Val Thr Ala Cys Thr Pro Ser Asp Gly Pro Gly Gly
 355 360 365

Gly Arg Ala Ala
 370

<210> 540
 <211> 1113
 <212> DNA
 <213> Homo sapiens

<400> 540
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 aacctgtccc tcctgagccc caaccacagt ctgctgcccc cgcatctgct gctcaatgcc 120
 agccacggcg ccttcctgcc cctcgggctc aaggtcacca tcgtggggct ctacctggcc 180
 gtgtgtgtcg gagggctcct ggggaactgc cttgtcatgt acgtcatcct caggcacacc 240
 aaaatgaaga cagccaccaa tatttacatc tttaacctgg ccctggccga cactctggtc 300
 ctgctgacgc tgcccttcca gggcacggac atcctcctgg gcttctggcc gtttggaat 360
 gcgctgtgca agacagtcac tgccattgac tactacaaca tggtcaccag caccttcacc 420
 ctaactgcca tgagtgtgga tcgctatgta gccatctgcc accccatccg tgccctcgac 480
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 gtcggtgttc ccgttgccat catgggctcg gcacaggctc aggatgaaga gatcgagtgc 600
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 aagacctctg agacggtacc gcggcccgcga tga 1113

<210> 541
 <211> 370
 <212> PRT
 <213> Homo sapiens

<400> 541
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 His Leu Gln Gly Asn Leu Ser Leu Leu Ser Pro Asn His Ser Leu Leu
 20 25 30
 Pro Pro His Leu Leu Leu Asn Ala Ser His Gly Ala Phe Leu Pro Leu
 35 40 45
 Gly Leu Lys Val Thr Ile Val Gly Leu Tyr Leu Ala Val Cys Val Gly
 50 55 60
 Gly Leu Leu Gly Asn Cys Leu Val Met Tyr Val Ile Leu Arg His Thr
 65 70 75 80

Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	85	90	95
Asp	Thr	Leu	Val	Leu	Leu	Thr	Leu	Pro	Phe	Gln	Gly	Thr	Asp	Ile	Leu	100	105	110
Leu	Gly	Phe	Trp	Pro	Phe	Gly	Asn	Ala	Leu	Cys	Lys	Thr	Val	Ile	Ala	115	120	125
Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Thr	Phe	Thr	Leu	Thr	Ala	Met	130	135	140
Ser	Val	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	Pro	Ile	Arg	Ala	Leu	Asp	145	150	155
Val	Arg	Thr	Ser	Ser	Lys	Ala	Gln	Ala	Val	Asn	Val	Ala	Ile	Trp	Ala	165	170	175
Leu	Ala	Ser	Val	Val	Gly	Val	Pro	Val	Ala	Ile	Met	Gly	Ser	Ala	Gln	180	185	190
Val	Glu	Asp	Glu	Glu	Ile	Glu	Cys	Leu	Val	Glu	Ile	Pro	Thr	Pro	Gln	195	200	205
Asp	Tyr	Trp	Gly	Pro	Val	Phe	Ala	Ile	Cys	Ile	Phe	Leu	Phe	Ser	Phe	210	215	220
Ile	Val	Pro	Val	Leu	Val	Ile	Ser	Val	Cys	Tyr	Ser	Leu	Met	Ile	Arg	225	230	235
Arg	Leu	Arg	Gly	Val	Arg	Leu	Leu	Ser	Gly	Ser	Arg	Glu	Lys	Asp	Arg	245	250	255
Asn	Leu	Arg	Arg	Ile	Lys	Arg	Leu	Val	Leu	Val	Val	Val	Ala	Val	Phe	260	265	270
Val	Gly	Cys	Trp	Thr	Pro	Val	Gln	Val	Phe	Val	Leu	Ala	Gln	Gly	Leu	275	280	285
Gly	Val	Gln	Pro	Ser	Ser	Glu	Thr	Ala	Val	Ala	Ile	Leu	Arg	Phe	Cys	290	295	300
Thr	Ala	Leu	Gly	Tyr	Val	Asn	Ser	Cys	Leu	Asn	Pro	Ile	Leu	Tyr	Ala	305	310	315
Phe	Leu	Asp	Glu	Asn	Phe	Lys	Ala	Cys	Phe	Arg	Lys	Phe	Cys	Cys	Ala	325	330	335
Ser	Ala	Leu	Arg	Arg	Asp	Val	Gln	Val	Ser	Asp	Arg	Val	Arg	Ser	Ile	340	345	350
Ala	Lys	Asp	Val	Ala	Leu	Ala	Cys	Lys	Thr	Ser	Glu	Thr	Val	Pro	Arg	355	360	365
Pro	Ala															370		

<210> 542
 <211> 1143
 <212> DNA
 <213> Homo sapiens

<400> 542
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 agcgccgggt cggaggacgc gcagctggag cccgcgcaca tctccccggc catccccgtc 180
 atcatcacgg cgggtctactc cgtagtggtc gtcgtgggct tgggtgggcaa ctcgctggtc 240
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 atgaattcct ggccttttgg ggatgtgctg tgcaagatag taatttccat tgattactac 420
 aacatgttca ccagcatctt caccttgacc atgatgagcg tggaccgcta cattgccgtg 480
 tgccaccccc tgaaggcttt ggacttccgc acacccttga aggcaaagat catcaatatc 540
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 accaacagta gcctgaatcc cattctctac gcctttcttg atgaaaactt caagcgggtg 1020
 ttccgggact tctgctttcc actgaagatg aggatggagc ggcagagcac tagcagagtc 1080
 cgaaatacag ttcaggatcc tgcttacctg agggacatcg atgggatgaa taaaccagta 1140
 tga 1143

<210> 543
 <211> 380
 <212> PRT
 <213> Homo sapiens

<400> 543
 Met Glu Ser Pro Ile Gln Ile Phe Arg Gly Glu Pro Gly Pro Thr Cys
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 Ala Pro Ser Ala Cys Leu Pro Pro Asn Ser Ser Ala Trp Phe Pro Gly
 20 25 30
 Trp Ala Glu Pro Asp Ser Asn Gly Ser Ala Gly Ser Glu Asp Ala Gln
 35 40 45
 Leu Glu Pro Ala His Ile Ser Pro Ala Ile Pro Val Ile Ile Thr Ala
 50 55 60
 Val Tyr Ser Val Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val
 65 70 75 80
 Met Phe Val Ile Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile
 85 90 95
 Tyr Ile Phe Asn Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Thr Met
 100 105 110
 Pro Phe Gln Ser Thr Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp

105040-60592860

115					120					125					
Val	Leu	Cys	Lys	Ile	Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr
130					135					140					
Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val
145					150					155					160
Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg	Thr	Pro	Leu	Lys	Ala	Lys
				165					170					175	
Ile	Ile	Asn	Ile	Cys	Ile	Trp	Leu	Leu	Ser	Ser	Ser	Val	Gly	Ile	Ser
			180					185					190		
Ala	Ile	Val	Leu	Gly	Gly	Thr	Lys	Val	Arg	Glu	Asp	Val	Asp	Val	Ile
		195					200					205			
Glu	Cys	Ser	Leu	Gln	Phe	Pro	Asp	Asp	Asp	Tyr	Ser	Trp	Trp	Asp	Leu
	210					215					220				
Phe	Met	Lys	Ile	Cys	Val	Phe	Ile	Phe	Ala	Phe	Val	Ile	Pro	Val	Leu
225					230					235					240
Ile	Ile	Ile	Val	Cys	Tyr	Thr	Leu	Met	Ile	Leu	Arg	Leu	Lys	Ser	Val
			245						250					255	
Arg	Leu	Leu	Ser	Gly	Ser	Arg	Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile
			260					265					270		
Lys	Arg	Leu	Val	Leu	Val	Val	Val	Ala	Val	Phe	Val	Val	Cys	Trp	Thr
		275					280					285			
Pro	Ile	His	Ile	Phe	Ile	Leu	Val	Glu	Ala	Leu	Gly	Ser	Thr	Ser	His
	290					295					300				
Ser	Thr	Ala	Ala	Leu	Ser	Ser	Tyr	Tyr	Phe	Cys	Ile	Ala	Leu	Gly	Tyr
305					310					315					320
Thr	Asn	Ser	Ser	Leu	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Leu	Asp	Glu	Asn
				325					330					335	
Phe	Lys	Arg	Cys	Phe	Arg	Asp	Phe	Cys	Phe	Pro	Leu	Lys	Met	Arg	Met
			340					345					350		
Glu	Arg	Gln	Ser	Thr	Ser	Arg	Val	Arg	Asn	Thr	Val	Gln	Asp	Pro	Ala
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<210> 544
 <211> 1203
 <212> DNA
 <213> Homo sapiens
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<212> PRT
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Leu Ala Tyr Ser Ser Cys Ser Pro Ala Pro Ser Pro Gly Ser Trp Val
          20              25              30

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  35              40              45

Arg Thr Asn Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
  50              55              60

Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
  65              70              75              80

Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
          85              90              95

Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
 100              105              110

Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
 115              120              125

Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
 130              135              140

Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu

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105040-505000

145		150		155		160
Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys						
		165		170		175
Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys						
		180		185		190
Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala						
		195		200		205
Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser						
		210		215		220
His Pro Thr Trp Tyr Trp Glu Asn Leu Val Lys Ile Cys Val Phe Ile						
		225		230		235
Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu						
		245		250		255
Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu						
		260		265		270
Lys Asp Arg Asn Leu Arg Arg Ile Lys Arg Met Val Leu Val Val Val						
		275		280		285
Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile						
		290		295		300
Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp						
		305		310		315
His Phe Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val						
		325		330		335
Leu Tyr Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe						
		340		345		350
Cys Ile Pro Thr Ser Ser Asn Ile Glu Gln Gln Asn Ser Thr Arg Ile						
		355		360		365
Arg Gln Asn Thr Arg Asp His Pro Ser Thr Ala Asn Thr Val Asp Arg						
		370		375		380
Thr Asn His Gln Leu Glu Asn Leu Glu Ala Glu Thr Ala Pro Leu Pro						
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 <212> DNA
 <213> Homo sapiens
 <400> 546

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<210> 547
<211> 392
<212> PRT
<213> Homo sapiens

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<400> 547
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  1                      5                      10                      15

Leu Ala Tyr Ser Ser Cys Ser Pro Ala Pro Ser Pro Gly Ser Trp Val
      20                      25                      30

Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
      35                      40                      45

Arg Thr Asn Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
      50                      55                      60

Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
      65                      70                      75                      80

Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
      85                      90                      95

Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
      100                      105                      110

Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
      115                      120                      125

Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
      130                      135                      140

Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu
      145                      150                      155                      160

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Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys
165 170 175

Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys
180 185 190

Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala
195 200 205

Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser
210 215 220

His Pro Thr Trp Tyr Trp Glu Asn Leu Val Lys Ile Cys Val Phe Ile
225 230 235 240

Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu
245 250 255

Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu
260 265 270

Lys Asp Arg Asn Leu Arg Arg Ile Lys Arg Met Val Leu Val Val Val
275 280 285

Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile
290 295 300

Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp
305 310 315 320

His Phe Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val
325 330 335

Leu Tyr Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe
340 345 350

Cys Ile Pro Thr Ser Ser Asn Ile Glu Gln Gln Asn Ser Thr Arg Ile
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370 375 380

Thr Asn His Gln Val Arg Ser Leu
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<212> DNA
<213> Homo sapiens

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<210> 549
 <211> 425
 <212> PRT
 <213> Homo sapiens

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 Arg Tyr Leu Trp Arg Asp Tyr Leu Tyr Pro Lys Gln Tyr Glu Trp Val
 35 40 45
 Leu Ile Ala Ala Tyr Val Ala Val Phe Val Val Ala Leu Val Gly Asn
 50 55 60
 Thr Leu Val Cys Leu Ala Val Trp Arg Asn His His Met Arg Thr Val
 65 70 75 80
 Thr Asn Tyr Phe Ile Val Asn Leu Ser Leu Ala Asp Val Leu Val Thr
 85 90 95
 Ala Ile Cys Leu Pro Ala Ser Leu Leu Val Asp Ile Thr Glu Ser Trp
 100 105 110
 Leu Phe Gly His Ala Leu Cys Lys Val Ile Pro Tyr Leu Gln Ala Val
 115 120 125
 Ser Val Ser Val Ala Val Leu Thr Leu Ser Phe Ile Ala Leu Asp Arg
 130 135 140
 Trp Tyr Ala Ile Cys His Pro Leu Leu Phe Lys Ser Thr Ala Arg Arg
 145 150 155 160
 Ala Arg Gly Ser Ile Leu Gly Ile Trp Ala Val Ser Leu Ala Ile Met

Val Pro Gln Ala Ala Val Met Glu Cys Ser Ser Val Leu Pro Glu Leu
180 185 190

Ala Asn Arg Thr Arg Leu Phe Ser Val Cys Asp Glu Arg Trp Ala Asp
195 200 205

Asp Leu Tyr Pro Lys Ile Tyr His Ser Cys Phe Phe Ile Val Thr Tyr
210 215 220

Leu Ala Pro Leu Gly Leu Met Ala Met Ala Tyr Phe Gln Ile Phe Arg
225 230 235 240

Lys Leu Trp Gly Arg Gln Ile Pro Gly Thr Thr Ser Ala Leu Val Arg
245 250 255

Asn Trp Lys Arg Pro Ser Asp Gln Leu Gly Asp Leu Glu Gln Gly Leu
260 265 270

Ser Gly Glu Pro Gln Pro Arg Gly Arg Ala Phe Leu Ala Glu Val Lys
275 280 285

Gln Met Arg Ala Arg Arg Lys Thr Lys Lys Met Leu Met Val Val Leu
290 295 300

Leu Val Phe Ala Leu Cys Tyr Leu Pro Ile Ser Val Leu Asn Val Leu
305 310 315 320

Lys Arg Val Phe Gly Met Phe Arg Gln Ala Ser Asp Arg Glu Ala Val
325 330 335

Tyr Ala Cys Phe Thr Phe Ser His Trp Leu Val Tyr Ala Asn Ser Ala
340 345 350

Ala Asn Pro Ile Ile Tyr Asn Phe Leu Ser Gly Lys Phe Arg Glu Gln
355 360 365

Phe Lys Ala Ala Phe Ser Cys Cys Leu Pro Gly Leu Gly Pro Cys Gly
370 375 380

Ser Leu Lys Ala Pro Ser Pro Arg Ser Ser Ala Ser His Lys Ser Leu
385 390 395 400

Ser Leu Gln Ser Arg Cys Ser Ile Ser Lys Ile Ser Glu His Val Val
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Leu Thr Ser Val Thr Thr Val Leu Pro
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<210> 550
<211> 1335
<212> DNA
<213> Homo sapiens

<400> 550

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<210> 551
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 551
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 Asp Tyr Asp Asp Glu Glu Phe Leu Arg Tyr Leu Trp Arg Glu Tyr Leu
 35 40 45
 His Pro Lys Glu Tyr Glu Trp Val Leu Ile Ala Gly Tyr Ile Ile Val
 50 55 60
 Phe Val Val Ala Leu Ile Gly Asn Val Leu Val Cys Val Ala Val Trp
 65 70 75 80
 Lys Asn His His Met Arg Thr Val Thr Asn Tyr Phe Ile Val Asn Leu
 85 90 95
 Ser Leu Ala Asp Val Leu Val Thr Ile Thr Cys Leu Pro Ala Thr Leu
 100 105 110
 Val Val Asp Ile Thr Glu Thr Trp Phe Phe Gly Gln Ser Leu Cys Lys
 115 120 125
 Val Ile Pro Tyr Leu Gln Thr Val Ser Val Ser Val Ser Val Leu Thr
 130 135 140

Leu	Ser	Cys	Ile	Ala	Leu	Asp	Arg	Trp	Tyr	Ala	Ile	Cys	His	Pro	Leu	145	150	155	160
Met	Phe	Lys	Ser	Thr	Ala	Lys	Arg	Ala	Arg	Asn	Ser	Ile	Val	Ile	Ile	165	170	175	
Trp	Ile	Val	Ser	Cys	Ile	Ile	Met	Ile	Pro	Gln	Ala	Ile	Val	Met	Glu	180	185	190	
Cys	Ser	Thr	Val	Phe	Pro	Gly	Leu	Ala	Asn	Lys	Thr	Thr	Leu	Phe	Thr	195	200	205	
Val	Cys	Asp	Glu	Arg	Trp	Gly	Gly	Glu	Ile	Tyr	Pro	Lys	Met	Tyr	His	210	215	220	
Ile	Cys	Phe	Phe	Leu	Val	Thr	Tyr	Met	Ala	Pro	Leu	Cys	Leu	Met	Val	225	230	235	240
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Val	Ala	Ala	Glu	Ile	Lys	Gln	Ile	Arg	Ala	Arg	Arg	Lys	Thr	Lys	Arg	290	295	300	
Met	Leu	Met	Val	Val	Leu	Leu	Val	Phe	Ala	Ile	Cys	Tyr	Leu	Pro	Ile	305	310	315	320
Ser	Ile	Leu	Asn	Val	Leu	Lys	Arg	Val	Phe	Gly	Met	Phe	Ala	His	Thr	325	330	335	
Glu	Asp	Arg	Glu	Thr	Val	Tyr	Ala	Trp	Phe	Thr	Phe	Ser	His	Trp	Leu	340	345	350	
Val	Tyr	Ala	Asn	Ser	Ala	Ala	Asn	Pro	Ile	Ile	Tyr	Asn	Phe	Leu	Ser	355	360	365	
Gly	Lys	Phe	Arg	Glu	Glu	Phe	Lys	Ala	Ala	Phe	Ser	Cys	Cys	Cys	Leu	370	375	380	
Gly	Val	His	His	Arg	Gln	Glu	Asp	Arg	Leu	Thr	Arg	Gly	Arg	Thr	Ser	385	390	395	400
Thr	Glu	Ser	Arg	Lys	Ser	Leu	Thr	Thr	Gln	Ile	Ser	Asn	Phe	Asp	Asn	405	410	415	
Ile	Ser	Lys	Leu	Ser	Glu	Gln	Val	Val	Leu	Thr	Ser	Ile	Ser	Thr	Leu	420	425	430	
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 <212> DNA
 <213> Homo sapiens

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<210> 553
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 553
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 Met Cys Leu Glu Lys Ile Gln Arg Ala Asn Glu Leu Met Gly Phe Asn
 35 40 45
 Asp Ser Ser Pro Gly Cys Pro Gly Met Trp Asp Asn Ile Thr Cys Trp
 50 55 60
 Lys Pro Ala His Val Gly Glu Met Val Leu Val Ser Cys Pro Glu Leu
 65 70 75 80
 Phe Arg Ile Phe Asn Pro Asp Gln Val Trp Glu Thr Glu Thr Ile Gly
 85 90 95

[illegible]

Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Ile Lys Arg Lys Trp Arg
405 410 415

Ser Trp Lys Val Asn Arg Tyr Phe Ala Val Asp Phe Lys His Arg His
420 425 430

Pro Ser Leu Ala Ser Ser Gly Val Asn Gly Gly Thr Gln Leu Ser Ile
435 440 445

Leu Ser Lys Ser Ser Ser Gln Ile Arg Met Ser Gly Leu Pro Ala Asp
450 455 460

Asn Leu Ala Thr
465

<210> 554
<211> 1029
<212> DNA
<213> Homo sapiens

<400> 554
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gcccgcctgt acccttgcaa gaaattcaat gagataaaga tcttcatggt gaacctcacc 180
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<210> 555
<211> 342
<212> PRT
<213> Homo sapiens

<400> 555
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Leu Phe Pro Ile Val Tyr Ser Ile Ile Phe Val Leu Gly Val Ile Ala
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Asn Gly Tyr Val Leu Trp Val Phe Ala Arg Leu Tyr Pro Cys Lys Lys
35 40 45

<210> 556
 <211> 1209
 <212> DNA
 <213> Homo sapiens

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 ttctccatga cgctggggcg cgtgtccaac ctgctggcgc tggcgctgct ggcgcaggcc 180
 gcggggccgc tgcgacgcgc ccgctcggcc accaccttcc tgcgtgttcgt ggccagcctg 240
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 cacttctaa 1209

<210> 557
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 557
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 Gly Ala Ser Pro Ala Leu Pro Ile Phe Ser Met Thr Leu Gly Ala Val
 35 40 45
 Ser Asn Leu Leu Ala Leu Ala Leu Leu Ala Gln Ala Ala Gly Arg Leu
 50 55 60
 Arg Arg Arg Arg Ser Ala Thr Thr Phe Leu Leu Phe Val Ala Ser Leu
 65 70 75 80
 Leu Ala Thr Asp Leu Ala Gly His Val Ile Pro Gly Ala Leu Val Leu
 85 90 95
 Arg Leu Tyr Thr Ala Gly Arg Ala Pro Ala Gly Gly Ala Cys His Phe
 100 105 110

Leu	Gly	Gly	Cys	Met	Val	Phe	Phe	Gly	Leu	Cys	Pro	Leu	Leu	Leu	Gly
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Cys	Gly	Met	Ala	Val	Glu	Arg	Cys	Val	Gly	Val	Thr	Arg	Pro	Leu	Leu
	130					135					140				
His	Ala	Ala	Arg	Val	Ser	Val	Ala	Arg	Ala	Arg	Leu	Ala	Leu	Ala	Ala
145					150					155					160
Val	Ala	Ala	Val	Ala	Leu	Ala	Val	Ala	Leu	Leu	Pro	Leu	Ala	Arg	Val
				165					170					175	
Gly	Arg	Tyr	Glu	Leu	Gln	Tyr	Pro	Gly	Thr	Trp	Cys	Phe	Ile	Gly	Leu
			180					185					190		
Gly	Pro	Pro	Gly	Gly	Trp	Arg	Gln	Ala	Leu	Leu	Ala	Gly	Leu	Phe	Ala
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Ser	Gly	Leu	Ala	Leu	His	Arg	Ala	Arg	Trp	Arg	Arg	Arg	Ser	Arg	Arg
225					230					235					240
Pro	Pro	Pro	Ala	Ser	Gly	Pro	Asp	Ser	Arg	Arg	Arg	Trp	Gly	Ala	His
				245					250					255	
Gly	Pro	Arg	Ser	Ala	Ser	Ala	Ser	Ser	Ala	Ser	Ser	Ile	Ala	Ser	Ala
			260						265				270		
Ser	Thr	Phe	Phe	Gly	Gly	Ser	Arg	Ser	Ser	Gly	Ser	Ala	Arg	Arg	Ala
		275					280					285			
Arg	Ala	His	Asp	Val	Glu	Met	Lys	Gly	Gln	Leu	Val	Gly	Ile	Met	Val
	290					295					300				
Val	Ser	Cys	Ile	Cys	Trp	Ser	Pro	Met	Leu	Val	Leu	Val	Ala	Leu	Ala
305					310					315					320
Val	Gly	Gly	Trp	Ser	Ser	Thr	Ser	Leu	Gln	Arg	Pro	Leu	Phe	Leu	Ala
				325					330					335	
Val	Arg	Leu	Ala	Ser	Trp	Asn	Gln	Ile	Leu	Asp	Pro	Trp	Val	Tyr	Ile
			340					345					350		
Leu	Leu	Arg	Gln	Ala	Val	Leu	Arg	Gln	Leu	Leu	Arg	Leu	Leu	Pro	Pro
		355					360					365			
Arg	Ala	Gly	Ala	Lys	Gly	Gly	Pro	Ala	Gly	Leu	Gly	Leu	Thr	Pro	Ser
	370					375					380				
Ala	Trp	Glu	Ala	Ser	Ser	Leu	Arg	Ser	Ser	Arg	His	Ser	Gly	Leu	Ser
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His	Phe														

<210> 558
 <211> 1077
 <212> DNA
 <213> Homo sapiens

<400> 558
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 tactgccccg ggacctggtg cttcatccgg cacgggcgga ccgcttacct gcagctgtac 600
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<210> 559
 <211> 358
 <212> PRT
 <213> Homo sapiens

<400> 559
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 35 40 45
 Arg Trp Arg Gly Asp Val Gly Cys Ser Ala Gly Arg Arg Ser Ser Leu
 50 55 60
 Ser Leu Phe His Val Leu Val Thr Glu Leu Val Phe Thr Asp Leu Leu
 65 70 75 80
 Gly Thr Cys Leu Ile Ser Pro Val Val Leu Ala Ser Tyr Ala Arg Asn
 85 90 95
 Gln Thr Leu Val Ala Leu Ala Pro Glu Ser Arg Ala Cys Thr Tyr Phe
 100 105 110
 Ala Phe Ala Met Thr Phe Phe Ser Leu Ala Thr Met Leu Met Leu Phe
 115 120 125

Ala Met Ala Leu Glu Arg Tyr Leu Ser Ile Gly His Pro Tyr Phe Tyr
130 135 140

Gln Arg Arg Val Ser Ala Ser Gly Gly Leu Ala Val Leu Pro Val Ile
145 150 155 160

Tyr Ala Val Ser Leu Leu Phe Cys Ser Leu Pro Leu Leu Asp Tyr Gly
165 170 175

Gln Tyr Val Gln Tyr Cys Pro Gly Thr Trp Cys Phe Ile Arg His Gly
180 185 190

Arg Thr Ala Tyr Leu Gln Leu Tyr Ala Thr Leu Leu Leu Leu Ile
195 200 205

Val Ser Val Leu Ala Cys Asn Phe Ser Val Ile Leu Asn Leu Ile Arg
210 215 220

Met His Arg Arg Ser Arg Arg Ser Arg Cys Gly Pro Ser Leu Gly Ser
225 230 235 240

Gly Arg Gly Gly Pro Gly Ala Arg Arg Arg Gly Glu Arg Val Ser Met
245 250 255

Ala Glu Glu Thr Asp His Lys Ile Leu Leu Ala Ile Met Thr Ile Thr
260 265 270

Phe Ala Val Cys Ser Leu Pro Phe Thr Ile Phe Ala Tyr Met Asn Glu
275 280 285

Thr Ser Ser Arg Lys Glu Lys Trp Asp Leu Gln Ala Leu Arg Phe Leu
290 295 300

Ser Ile Asn Ser Ile Ile Asp Pro Trp Val Phe Ala Ile Leu Arg Pro
305 310 315 320

Pro Val Leu Arg Leu Met Arg Ser Val Leu Cys Cys Arg Ile Ser Leu
325 330 335

Arg Thr Gln Asp Ala Thr Gln Thr Ser Cys Ser Thr Gln Ser Asp Ala
340 345 350

Ser Lys Gln Ala Asp Leu
355

<210> 560
<211> 1467
<212> DNA
<213> Homo sapiens

<400> 560
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gtgctgtgca agtcgcgcaa ggagcagaag gagacgacct tctacacgct ggtatgtggg 180
ctggctgtca ccgacctgtt gggcactttg ttggtgagcc cggtgaccat cgccacgtac 240

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<210> 561
<211> 488
<212> PRT
<213> Homo sapiens

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<400> 561
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Val Gly Asn Leu Val Ala Ile Val Val Leu Cys Lys Ser Arg Lys Glu
          35                      40                      45

Gln Lys Glu Thr Thr Phe Tyr Thr Leu Val Cys Gly Leu Ala Val Thr
          50                      55                      60

Asp Leu Leu Gly Thr Leu Leu Val Ser Pro Val Thr Ile Ala Thr Tyr
          65                      70                      75                      80

Met Lys Gly Gln Trp Pro Gly Gly Gln Pro Leu Cys Glu Tyr Ser Thr
          85                      90                      95

Phe Ile Leu Leu Phe Phe Ser Leu Ser Gly Leu Ser Ile Ile Cys Ala
          100                      105                      110

Met Ser Val Glu Arg Tyr Leu Ala Ile Asn His Ala Tyr Phe Tyr Ser
          115                      120                      125

His Tyr Val Asp Lys Arg Leu Ala Gly Leu Thr Leu Phe Ala Val Tyr
          130                      135                      140

Ala Ser Asn Val Leu Phe Cys Ala Leu Pro Asn Met Gly Leu Gly Ser

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0902E09 040507

450

455

460

Pro Ala Pro Lys Gly Ser Ser Leu Gln Val Thr Phe Pro Ser Glu Thr
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Leu Asn Leu Ser Glu Lys Cys Ile
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<210> 562
 <211> 1782
 <212> DNA
 <213> Homo sapiens

<400> 562
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<210> 563
 <211> 593
 <212> PRT
 <213> Homo sapiens

<400> 563
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Pro Val Leu Ser Ser Ala Tyr Ala Leu Val Asp Ala Asp Asp Val Met

09826609-040507

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Glu	Lys	Arg	Leu	Lys	Glu	Val	Leu	Gln	Arg	Pro	Ala	Ser	Ile	Met	Glu
	50					55					60				
Ser	Asp	Lys	Gly	Trp	Thr	Ser	Ala	Ser	Thr	Ser	Gly	Lys	Pro	Arg	Lys
	65					70					75				80
Asp	Lys	Ala	Ser	Gly	Lys	Leu	Tyr	Pro	Glu	Ser	Glu	Glu	Asp	Lys	Glu
				85					90					95	
Ala	Pro	Thr	Gly	Ser	Arg	Tyr	Arg	Gly	Arg	Pro	Cys	Leu	Pro	Glu	Trp
			100					105					110		
Asp	His	Ile	Leu	Cys	Trp	Pro	Leu	Gly	Ala	Pro	Gly	Glu	Val	Val	Ala
		115					120					125			
Val	Pro	Cys	Pro	Asp	Tyr	Ile	Tyr	Asp	Phe	Asn	His	Lys	Gly	His	Ala
	130					135					140				
Tyr	Arg	Arg	Cys	Asp	Arg	Asn	Gly	Ser	Trp	Glu	Leu	Val	Pro	Gly	His
	145					150					155				160
Asn	Arg	Thr	Trp	Ala	Asn	Tyr	Ser	Glu	Cys	Val	Lys	Phe	Leu	Thr	Asn
				165					170					175	
Glu	Thr	Arg	Glu	Arg	Glu	Val	Phe	Asp	Arg	Leu	Gly	Met	Ile	Tyr	Thr
			180					185					190		
Val	Gly	Tyr	Ser	Val	Ser	Leu	Ala	Ser	Leu	Thr	Val	Ala	Val	Leu	Ile
		195					200					205			
Leu	Ala	Tyr	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	His	Met
	210					215					220				
His	Leu	Phe	Leu	Ser	Phe	Met	Leu	Arg	Ala	Val	Ser	Ile	Phe	Val	Lys
	225					230					235				240
Asp	Ala	Val	Leu	Tyr	Ser	Gly	Ala	Thr	Leu	Asp	Glu	Ala	Glu	Arg	Leu
				245					250					255	
Thr	Glu	Glu	Glu	Leu	Arg	Ala	Ile	Ala	Gln	Ala	Pro	Pro	Pro	Pro	Ala
			260					265					270		
Thr	Ala	Ala	Ala	Gly	Tyr	Ala	Gly	Cys	Arg	Val	Ala	Val	Thr	Phe	Phe
		275					280					285			
Leu	Tyr	Phe	Leu	Ala	Thr	Asn	Tyr	Tyr	Trp	Ile	Leu	Val	Glu	Gly	Leu
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Tyr	Leu	His	Ser	Leu	Ile	Phe	Met	Ala	Phe	Phe	Ser	Glu	Lys	Lys	Tyr
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Leu	Trp	Gly	Phe	Thr	Val	Phe	Gly	Trp	Gly	Leu	Pro	Ala	Val	Phe	Val

				325						330						335			
Ala	Val	Trp	Val	Ser	Val	Arg	Ala	Thr	Leu	Ala	Asn	Thr	Gly	Cys	Trp				
			340					345					350						
Asp	Leu	Ser	Ser	Gly	Asn	Lys	Lys	Trp	Ile	Ile	Gln	Val	Pro	Ile	Leu				
		355					360					365							
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	370					375					380								
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Gln	Gln	Tyr	Arg	Lys	Leu	Leu	Lys	Ser	Pro	Leu	Val	Leu	Met	Pro	Leu				
				405					410					415					
Phe	Gly	Val	His	Tyr	Ile	Val	Phe	Met	Ala	Thr	Pro	Tyr	Thr	Glu	Val				
			420					425					430						
Ser	Gly	Thr	Leu	Trp	Gln	Val	Gln	Met	His	Tyr	Glu	Met	Leu	Phe	Asn				
		435					440					445							
Ser	Phe	Gln	Gly	Phe	Phe	Val	Ala	Ile	Ile	Tyr	Cys	Phe	Cys	Asn	Gly				
	450					455					460								
Glu	Val	Gln	Ala	Glu	Ile	Lys	Lys	Ser	Trp	Ser	Arg	Trp	Thr	Leu	Ala				
465					470					475					480				
Leu	Asp	Phe	Lys	Arg	Lys	Ala	Arg	Ser	Gly	Ser	Ser	Ser	Tyr	Ser	Tyr				
				485					490					495					
Gly	Pro	Met	Val	Ser	His	Thr	Ser	Val	Thr	Asn	Val	Gly	Pro	Arg	Val				
			500					505					510						
Gly	Leu	Gly	Leu	Pro	Leu	Ser	Pro	Arg	Leu	Leu	Pro	Thr	Ala	Thr	Thr				
		515					520					525							
Asn	Gly	His	Pro	Gln	Leu	Pro	Gly	His	Ala	Lys	Pro	Gly	Thr	Pro	Ala				
	530					535					540								
Leu	Glu	Thr	Leu	Glu	Thr	Thr	Pro	Pro	Ala	Met	Ala	Ala	Pro	Lys	Asp				
545					550					555					560				
Asp	Gly	Phe	Leu	Asn	Gly	Ser	Cys	Ser	Gly	Leu	Asp	Glu	Glu	Ala	Ser				
				565					570					575					
Gly	Pro	Glu	Arg	Pro	Pro	Ala	Leu	Leu	Gln	Glu	Glu	Trp	Glu	Thr	Val				
			580					585					590						

Met

<210> 564
 <211> 1653
 <212> DNA

<213> Homo sapiens

<400> 564

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gtgctgaaag cgaaagtaca atgtgaactc aacatcacag ctcaactcca ggagggagaa 180
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atatcggtg ttccatgccc tccttatatt tatgacttca accataaagg agttgctttc 300
cgacactgta accccaatgg aacatgggat tttatgcaca gcttaaataa aacatggggc 360
aattattcag actgccttcg ctttctgcag ccagatatca gcataggaaa gcaagaattc 420
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atgcacttat ttgtgtcttt catgctgaga gctacaagca tctttgtcaa agacagagta 600
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<210> 565

<211> 550

<212> PRT

<213> Homo sapiens

<400> 565

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Gly Ser Cys Leu Leu Ala Arg Ala Gln Leu Asp Ser Asp Gly Thr Ile
      20              25              30

Thr Ile Glu Glu Gln Ile Val Leu Val Leu Lys Ala Lys Val Gln Cys
      35              40              45

Glu Leu Asn Ile Thr Ala Gln Leu Gln Glu Gly Glu Gly Asn Cys Phe
      50              55              60

Pro Glu Trp Asp Gly Leu Ile Cys Trp Pro Arg Gly Thr Val Gly Lys
      65              70              75              80

Ile Ser Ala Val Pro Cys Pro Pro Tyr Ile Tyr Asp Phe Asn His Lys
      85              90              95
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00000000000000000000000000000000

Phe Asn Ser Phe Gln Gly Phe Phe Val Ser Ile Ile Tyr Cys Tyr Cys
 405 410 415
 Asn Gly Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn
 420 425 430
 Leu Ser Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser Arg Arg Cys
 435 440 445
 Gly Ser Val Leu Thr Thr Val Thr His Ser Thr Ser Ser Gln Ser Gln
 450 455 460
 Val Ala Ala Ser Thr Arg Met Val Leu Ile Ser Gly Lys Ala Ala Lys
 465 470 475 480
 Ile Ala Ser Arg Gln Pro Asp Ser His Ile Thr Leu Pro Gly Tyr Val
 485 490 495
 Trp Ser Asn Ser Glu Gln Asp Cys Leu Pro His Ser Phe His Glu Glu
 500 505 510
 Thr Lys Glu Asp Ser Gly Arg Gln Gly Asp Asp Ile Leu Met Glu Lys
 515 520 525
 Pro Ser Arg Pro Met Glu Ser Asn Pro Asp Thr Glu Gly Cys Gln Gly
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 Glu Thr Glu Asp Val Leu
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<210> 566
 <211> 1323
 <212> DNA
 <213> Homo sapiens

<400> 566
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 gagcaagacc agtgccctgca ggaactctcc agagagcaga caggagacct gggcacggag 180
 cagccagtgc cagggttgta ggggatgtgg gacaacataa gctgctggcc ctcttctgtg 240
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 ctggcctgtg gcgttaatgt gaacgactct tccaacgaga agcggcactc ctacctgtgt 420
 aagctgaaag tcatgtacac cgtgggctac agctcctccc tggatcatgct cctggtcgcc 480
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tga 1323

<210> 567
<211> 440
<212> PRT
<213> Homo sapiens

<400> 567
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Leu Leu Ala Cys Ala Ala His Ser Thr Gly Ala Leu Pro Arg Leu Cys
20 25 30
Asp Val Leu Gln Val Leu Trp Glu Glu Gln Asp Gln Cys Leu Gln Glu
35 40 45
Leu Ser Arg Glu Gln Thr Gly Asp Leu Gly Thr Glu Gln Pro Val Pro
50 55 60
Gly Cys Glu Gly Met Trp Asp Asn Ile Ser Cys Trp Pro Ser Ser Val
65 70 75 80
Pro Gly Arg Met Val Glu Val Glu Cys Pro Arg Phe Leu Arg Met Leu
85 90 95
Thr Ser Arg Asn Gly Ser Leu Phe Arg Asn Cys Thr Gln Asp Gly Trp
100 105 110
Ser Glu Thr Phe Pro Arg Pro Asn Leu Ala Cys Gly Val Asn Val Asn
115 120 125
Asp Ser Ser Asn Glu Lys Arg His Ser Tyr Leu Leu Lys Leu Lys Val
130 135 140
Met Tyr Thr Val Gly Tyr Ser Ser Ser Leu Val Met Leu Leu Val Ala
145 150 155 160
Leu Gly Ile Leu Cys Ala Phe Arg Arg Leu His Cys Thr Arg Asn Tyr
165 170 175
Ile His Met His Leu Phe Val Ser Phe Ile Leu Arg Ala Leu Ser Asn
180 185 190
Phe Ile Lys Asp Ala Val Leu Phe Ser Ser Asp Asp Val Thr Tyr Cys
195 200 205
Asp Pro His Arg Ala Gly Cys Lys Leu Val Met Val Leu Phe Gln Tyr
210 215 220
Cys Ile Met Ala Asn Tyr Ser Trp Leu Leu Val Glu Gly Leu Tyr Leu
225 230 235 240
His Thr Leu Leu Ala Ile Ser Phe Phe Ser Glu Arg Lys Tyr Leu Gln

	245		250		255
Gly Phe Val	Ala Phe Gly Trp Gly	Ser Pro Ala Ile Phe Val	Ala Leu		
	260	265	270		
Trp Ala Ile	Ala Arg His Phe Leu Glu Asp Val	Gly Cys Trp Asp Ile			
	275	280	285		
Asn Ala Asn	Ala Ser Ile Trp Trp Ile Ile Arg	Gly Pro Val Ile Leu			
	290	295	300		
Ser Ile Leu	Ile Asn Phe Ile Leu Phe Ile Asn	Ile Leu Arg Ile Leu			
305	310	315	320		
Met Arg Lys	Leu Arg Thr Gln Glu Thr Arg Gly	Asn Glu Val Ser His			
	325	330	335		
Tyr Lys Arg	Leu Ala Arg Ser Pro Leu Leu Ile	Pro Leu Phe Gly			
	340	345	350		
Ile His Tyr	Ile Val Phe Ala Phe Ser Pro Glu Asp	Ala Met Glu Ile			
	355	360	365		
Gln Leu Phe	Phe Glu Leu Ala Leu Gly Ser Phe	Gln Gly Leu Val Val			
	370	375	380		
Ala Val Leu	Tyr Cys Phe Leu Asn Gly Glu Val	Gln Leu Glu Val Gln			
385	390	395	400		
Lys Lys Trp	Gln Gln Trp His Leu Arg Glu Phe	Pro Leu His Pro Val			
	405	410	415		
Ala Ser Phe	Ser Asn Ser Thr Lys Ala Ser His	Leu Glu Gln Ser Gln			
	420	425	430		
Gly Thr Cys	Arg Thr Ser Ile Ile				
	435	440			

<210> 568
 <211> 1176
 <212> DNA
 <213> Homo sapiens

<400> 568
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 ccagggcgaa atgcgtccca gaacgggacc ttgagcgagg gccagggcag cgccatcctg 180
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 cgccactggc ccttcgggtgc gctgctctgc cgctcgtgc tcagcgtgga cgcgggtcaac 420
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 gtgtgggtgc tatcgctgct cgtcatcctg cccatcgtgg tcttctctcg caccgcggcc 600
 aacagcgacg gcacggtggc ttgcaacatg ctcatgccag agcccgtca acgctggctg 660
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Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
 225 230 235 240
 Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
 245 250 255
 Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Lys Leu Met
 260 265 270
 Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
 275 280 285
 Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
 290 295 300
 Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
 305 310 315 320
 Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
 325 330 335
 Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
 340 345 350
 Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
 355 360 365
 Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
 370 375 380
 Thr Ser Arg Ile Thr Thr Leu
 385 390

<210> 570
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 570
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 acaagcaatg cagtcctcac attcatctat tttgtggtct gcatcattgg gttgtgtggc 180
 aacacacttg tcatttatgt catcctccgc tatgccaaaga tgaagaccat caccaacatt 240
 tacatcctca acctggccat cgcagatgag ctcttcatgc tgggtctgcc tttcttggtc 300
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aagagcttcc agaatgtcct ctgcttggtc aaggtgagcg gcacagatga tggggagcgg 1020
 agtgacagta agcaggacaa atcccggtg aatgagacca cggagaccga gaggaccctc 1080
 ctcaatggag acctccaaac cagtatctga 1110

<210> 571
 <211> 369
 <212> PRT
 <213> Homo sapiens

<400> 571
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 Ile Pro Phe Asp Leu Asn Gly Ser Val Val Ser Thr Asn Thr Ser Asn
 20 25 30
 Gln Thr Glu Pro Tyr Tyr Asp Leu Thr Ser Asn Ala Val Leu Thr Phe
 35 40 45
 Ile Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val
 50 55 60
 Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
 65 70 75 80
 Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
 85 90 95
 Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
 100 105 110
 Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
 115 120 125
 Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
 130 135 140
 Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
 145 150 155 160
 Met Ile Thr Met Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
 165 170 175
 Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
 180 185 190
 Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
 195 200 205
 Ile Ile Tyr Thr Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
 210 215 220
 Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
 225 230 235 240
 Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Lys Arg

405070-60592859

<211> 418
 <212> PRT
 <213> Homo sapiens

<400> 573

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Asn	Ala	Ser	Ser	Ala	Trp	Pro	Pro	Asp	Ala	Thr	Leu	Gly	Asn	Val	Ser	20	25	30	
Ala	Gly	Pro	Ser	Pro	Ala	Gly	Leu	Ala	Val	Ser	Gly	Val	Leu	Ile	Pro	35	40	45	
Leu	Val	Tyr	Leu	Val	Val	Cys	Val	Val	Gly	Leu	Leu	Gly	Asn	Ser	Leu	50	55	60	
Val	Ile	Tyr	Val	Val	Leu	Arg	His	Thr	Ala	Ser	Pro	Ser	Val	Thr	Asn	65	70	75	80
Val	Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Glu	Leu	Phe	Met	Leu	Gly	85	90	95	
Leu	Pro	Phe	Leu	Ala	Ala	Gln	Asn	Ala	Leu	Ser	Tyr	Trp	Pro	Phe	Gly	100	105	110	
Ser	Leu	Met	Cys	Arg	Leu	Val	Met	Ala	Val	Asp	Gly	Ile	Asn	Gln	Phe	115	120	125	
Thr	Ser	Ile	Phe	Cys	Leu	Thr	Val	Met	Ser	Val	Asp	Arg	Tyr	Leu	Ala	130	135	140	
Val	Val	His	Pro	Thr	Arg	Ser	Ala	Arg	Trp	Arg	Thr	Ala	Pro	Val	Ala	145	150	155	160
Arg	Thr	Val	Ser	Ala	Ala	Val	Trp	Val	Ala	Ser	Ala	Val	Val	Val	Leu	165	170	175	
Pro	Val	Val	Val	Phe	Ser	Gly	Val	Pro	Arg	Gly	Met	Ser	Thr	Cys	His	180	185	190	
Met	Gln	Trp	Pro	Glu	Pro	Ala	Ala	Ala	Trp	Arg	Ala	Gly	Phe	Ile	Ile	195	200	205	
Tyr	Thr	Ala	Ala	Leu	Gly	Phe	Phe	Gly	Pro	Leu	Leu	Val	Ile	Cys	Leu	210	215	220	
Cys	Tyr	Leu	Leu	Ile	Val	Val	Lys	Val	Arg	Ser	Ala	Gly	Arg	Arg	Val	225	230	235	240
Trp	Ala	Pro	Ser	Cys	Gln	Arg	Arg	Arg	Arg	Ser	Glu	Arg	Arg	Val	Lys	245	250	255	
Arg	Met	Val	Val	Ala	Val	Val	Ala	Leu	Phe	Val	Leu	Cys	Trp	Met	Pro	260	265	270	
Phe	Tyr	Val	Leu	Asn	Ile	Val	Asn	Val	Val	Cys	Pro	Leu	Pro	Glu	Glu				

60592360
 404504

275

280

285

Pro Ala Phe Phe Gly Leu Tyr Phe Leu Val Val Ala Leu Pro Tyr Ala
 290 295 300

Asn Ser Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Tyr Arg Phe
 305 310 315 320

Lys Gln Gly Phe Arg Arg Val Leu Leu Arg Pro Ser Arg Arg Val Arg
 325 330 335

Ser Gln Glu Pro Thr Val Gly Pro Pro Glu Lys Thr Glu Glu Glu Asp
 340 345 350

Glu Glu Glu Glu Asp Gly Glu Glu Ser Arg Glu Gly Gly Lys Gly Lys
 355 360 365

Glu Met Asn Gly Arg Val Ser Gln Ile Thr Gln Pro Gly Thr Ser Gly
 370 375 380

Gln Glu Arg Pro Pro Ser Arg Val Ala Ser Lys Glu Gln Gln Leu Leu
 385 390 395 400

Pro Gln Glu Ala Ser Thr Gly Glu Lys Ser Ser Thr Met Arg Ile Ser
 405 410 415

Tyr Leu

<210> 574
 <211> 1167
 <212> DNA
 <213> Homo sapiens

<400> 574
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[illegible]

0-9 **A** **B** **C** **D** **E** **F** **G** **H** **I**

Met Pro Phe Tyr Val Val Gln Leu Leu Asn Leu Val Val Thr Ser Leu
275 280 285

Asp Ala Thr Val Asn His Val Ser Leu Ile Leu Ser Tyr Ala Asn Ser
290 295 300

Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Arg Arg
305 310 315 320

Ser Phe Gln Arg Val Leu Cys Leu Arg Cys Cys Leu Leu Glu Gly Ala
325 330 335

Gly Gly Ala Glu Glu Glu Pro Leu Asp Tyr Tyr Ala Thr Ala Leu Lys
340 345 350

Ser Lys Gly Gly Ala Gly Cys Met Cys Pro Pro Leu Pro Cys Gln Gln
355 360 365

Glu Ala Leu Gln Pro Glu Pro Gly Arg Lys Arg Ile Pro Leu Thr Arg
370 375 380

Thr Thr Thr Phe
385

<210> 576
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 576
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gtgctggtgc cegtgtgtga cctgctggtg tgtgcggcgc ggctgggcgg gaacacgctg 180
gtcatctacg tgggtgtgcg cttcgccaag atgaagaccg tcaccaacat ctacattctc 240
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gccgcgtcct tctggccctt cggccccgtc ctgtgccgcc tgggtcatgac gctggacggc 360
gtcaaccagt tcaccagtgt cttctgcctg acagtcatga gcgtggaccg ctacctggca 420
gtggtgcacc cgctgagctc ggcccgtgg cgccgccgc gtgtggccaa gctggcgagc 480
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<211> 364
<212> PRT
<213> Homo sapiens

<400> 577

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35 40 45
Leu Val Cys Ala Ala Gly Leu Gly Gly Asn Thr Leu Val Ile Tyr Val
50 55 60
Val Leu Arg Phe Ala Lys Met Lys Thr Val Thr Asn Ile Tyr Ile Leu
65 70 75 80
Asn Leu Ala Val Ala Asp Val Leu Tyr Met Leu Gly Leu Pro Phe Leu
85 90 95
Ala Thr Gln Asn Ala Ala Ser Phe Trp Pro Phe Gly Pro Val Leu Cys
100 105 110
Arg Leu Val Met Thr Leu Asp Gly Val Asn Gln Phe Thr Ser Val Phe
115 120 125
Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu Ala Val Val His Pro
130 135 140
Leu Ser Ser Ala Arg Trp Arg Arg Pro Arg Val Ala Lys Leu Ala Ser
145 150 155 160
Ala Ala Ala Trp Val Leu Ser Leu Cys Met Ser Leu Pro Leu Leu Val
165 170 175
Phe Ala Asp Val Gln Glu Gly Gly Thr Cys Asn Ala Ser Trp Pro Glu
180 185 190
Pro Val Gly Leu Trp Gly Ala Val Phe Ile Ile Tyr Thr Ala Val Leu
195 200 205
Gly Phe Phe Ala Pro Leu Leu Val Ile Cys Leu Cys Tyr Leu Leu Ile
210 215 220
Val Val Lys Val Arg Ala Ala Gly Val Arg Val Gly Cys Val Arg Arg
225 230 235 240
Arg Ser Glu Arg Lys Val Lys Arg Met Val Leu Val Val Val Leu Val
245 250 255
Phe Ala Gly Cys Trp Leu Pro Phe Phe Thr Val Asn Ile Val Asn Leu
260 265 270
Ala Val Ala Leu Pro Gln Glu Pro Ala Ser Ala Gly Leu Tyr Phe Phe
275 280 285
Val Val Ile Leu Ser Tyr Ala Asn Ser Cys Ala Asn Pro Val Leu Tyr

290

295

300

Gly Phe Leu Ser Asp Asn Phe Arg Gln Ser Phe Gln Lys Val Leu Cys
305 310 315 320

Leu Arg Lys Gly Ser Gly Ala Lys Asp Ala Asp Ala Thr Glu Pro Arg
325 330 335

Pro Asp Arg Ile Arg Gln Gln Gln Glu Ala Thr Pro Pro Ala His Arg
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Ala Ala Ala Asn Gly Leu Met Gln Thr Ser Lys Leu
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<210> 578

<211> 1374

<212> DNA

<213> Homo sapiens

<400> 578

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<210> 579

<211> 457

<212> PRT

<213> Homo sapiens

<400> 579

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Gly Ala Leu Ala Trp Ala Leu Gly Pro Ala Gly Gly Gln Ala Ala Arg
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Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Glu	Thr	Ile	Gly	Cys	Ser
	50					55					60				
Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly	Gln
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Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Ser	Ile
				85					90					95	
Gln	Gly	Arg	Asn	Val	Ser	Arg	Ser	Cys	Thr	Asp	Glu	Gly	Trp	Thr	His
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Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Leu	Asp	Asp	Lys	Ala
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Ala	Ser	Leu	Asp	Glu	Gln	Gln	Thr	Met	Phe	Tyr	Gly	Ser	Val	Lys	Thr
	130					135					140				
Gly	Tyr	Thr	Ile	Gly	Tyr	Gly	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Val	Ala
145					150					155					160
Thr	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr
				165					170					175	
Ile	His	Met	His	Leu	Phe	Ile	Ser	Phe	Ile	Leu	Arg	Ala	Ala	Ala	Val
			180					185					190		
Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Gly	Glu	Ser	Asp	Gln	Cys
		195					200					205			
Ser	Glu	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Met	Val	Phe	Phe	Gln	Tyr
	210					215					220				
Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr	Leu
225					230					235					240
Tyr	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe	Trp
				245					250					255	
Gly	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Val	Pro	Ser	Thr	Phe	Thr	Met	Val
			260					265					270		
Trp	Thr	Ile	Ala	Arg	Ile	His	Phe	Glu	Asp	Tyr	Gly	Cys	Trp	Asp	Thr
		275					280					285			
Ile	Asn	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Gly	Pro	Ile	Leu	Thr	Ser
	290					295					300				
Ile	Leu	Val	Asn	Phe	Ile	Leu	Phe	Ile	Cys	Ile	Ile	Arg	Ile	Leu	Leu
305					310					315					320
Gln	Lys	Leu	Arg	Pro	Pro	Asp	Ile	Arg	Lys	Ser	Asp	Ser	Ser	Pro	Tyr
				325					330					335	

Ser Arg Leu Ala Arg Ser Pro Leu Leu Ile Pro Leu Phe Gly Val
340 345 350

His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Pro Glu Val
355 360 365

Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe Val Val
370 375 380

Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu Arg
385 390 395 400

Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp Asn Pro
405 410 415

Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr Cys Ser Thr
420 425 430

Gln Val Ser Met Leu Thr Arg Val Ser Pro Gly Ala Arg Arg Ser Ser
435 440 445

Ser Phe Gln Ala Glu Val Ser Leu Val
450 455

<210> 580
<211> 1317
<212> DNA
<213> Homo sapiens

<400> 580
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tgctggcggc ctgccaatgt gggagagacc gtcacgggtgc cctgccc aaa agtcttcagc 240
aattttttaca gcaaagcagg aaacataagc aaaaactgta cgagtgcagg atggtcagag 300
acgttcccag atttcgtcga tgcctgtggc tacagcgacc cggaggatga gagcaagatc 360
acgtttttata ttctggtgaa ggccatttat accctgggct acagtgtctc tctgatgtct 420
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<210> 581

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Pro Val Asn Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln
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Glu Glu Glu Thr Lys Cys Thr Glu Leu Leu Arg Ser Gln Thr Glu Lys
35 40 45

His Lys Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro
50 55 60

Ala Asn Val Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser
65 70 75 80

Asn Phe Tyr Ser Lys Ala Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp
85 90 95

Gly Trp Ser Glu Thr Phe Pro Asp Phe Val Asp Ala Cys Gly Tyr Ser
100 105 110

Asp Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala
115 120 125

Ile Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Ala Thr Gly
130 135 140

Ser Ile Ile Leu Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
145 150 155 160

Ile His Leu Asn Leu Phe Leu Ser Phe Ile Leu Arg Ala Ile Ser Val
165 170 175

Leu Val Lys Asp Asp Val Leu Tyr Ser Ser Ser Gly Thr Leu His Cys
180 185 190

Pro Asp Gln Pro Ser Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe
195 200 205

Leu Gln Tyr Cys Ile Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly
210 215 220

Leu Tyr Leu His Thr Leu Leu Val Ala Met Leu Pro Pro Arg Arg Cys
225 230 235 240

Phe Leu Ala Tyr Leu Leu Ile Gly Trp Gly Leu Pro Thr Val Cys Ile
245 250 255

Gly Ala Trp Thr Ala Ala Arg Leu Tyr Leu Glu Asp Thr Gly Cys Trp
260 265 270

Asp Thr Asn Asp His Ser Val Pro Trp Trp Val Ile Arg Ile Pro Ile

275 280 285
 Leu Ile Ser Ile Ile Val Asn Phe Val Leu Phe Ile Ser Ile Ile Arg
 290 295 300
 Ile Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln
 305 310 315 320
 Ser Gln Tyr Lys Arg Leu Ala Lys Ser Pro Leu Leu Leu Ile Pro Leu
 325 330 335
 Phe Gly Val His Tyr Met Val Phe Ala Val Phe Pro Ile Ser Ile Ser
 340 345 350
 Ser Lys Tyr Gln Ile Leu Phe Glu Leu Cys Leu Gly Ser Phe Gln Gly
 355 360 365
 Leu Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys
 370 375 380
 Glu Leu Lys Arg Lys Trp Arg Ser Arg Cys Pro Thr Pro Ser Ala Ser
 385 390 395 400
 Arg Asp Tyr Arg Val Cys Gly Ser Ser Phe Ser His Asn Gly Ser Glu
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 Gly Ala Leu Gln Phe His Arg Ala Ser Arg Ala Gln Ser Phe Leu Gln
 420 425 430
 Thr Glu Thr Ser Val Ile
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<210> 582
 <211> 32
 <212> DNA
 <213> Homo sapiens

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32

<210> 583
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 <212> DNA
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<400> 583
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33

<210> 584
 <211> 30
 <212> DNA
 <213> Homo sapiens

<400> 584

gtgaagcttg cccgggcagg atggacctgg

30

<210> 585
<211> 24
<212> DNA
<213> Homo sapiens

<400> 585
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24

<210> 586
<211> 3549
<212> DNA
<213> Homo sapiens

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 <211> 1181
 <212> PRT
 <213> Homo sapiens

<400> 587
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 Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro
 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60
 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125
 Lys Ser Leu Ala Phe Ser Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140
 Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp

145				150					155					160	
Asn	Pro	Tyr	Met	Thr 165	Ser	Ile	Pro	Val	Asn 170	Ala	Phe	Gln	Gly	Leu 175	Cys
Asn	Glu	Thr	Leu 180	Thr	Leu	Lys	Leu	Tyr 185	Asn	Asn	Gly	Phe	Thr 190	Ser	Val
Gln	Gly	Tyr 195	Asp	Phe	Phe	Gly	Thr 200	Lys	Leu	Asp	Ala	Val 205	Tyr	Leu	Asn
Lys	Asn 210	Lys	Tyr	Leu	Thr	Val 215	Ile	Asp	Lys	Asp	Ala 220	Phe	Gly	Gly	Val
Tyr 225	Ser	Gly	Pro	Ser	Leu 230	Leu	Asp	Val	Ser	Gln 235	Thr	Ser	Val	Thr	Ala 240
Leu	Pro	Ser	Lys	Gly 245	Leu	Glu	His	Leu	Lys 250	Glu	Leu	Ile	Ala	Arg 255	Asn
Ser	Trp	Thr	Leu 260	Lys	Lys	Leu	Ala	Leu 265	Ser	Leu	Ser	Phe	Leu 270	His	Leu
Thr	Arg	Ala 275	Asp	Leu	Ser	Tyr	Pro 280	Ser	His	Cys	Cys	Ala 285	Phe	Lys	Asn
Gln	Lys 290	Lys	Ile	Arg	Gly	Ile 295	Leu	Glu	Ser	Leu	Met 300	Cys	Asn	Glu	Ser
Ser 305	Ile	Glu	Thr	Leu	Arg 310	Gln	Arg	Lys	Ser	Val 315	Asn	Ala	Leu	Asn	Ser 320
Pro	Leu	His	Gln	Glu 325	Tyr	Glu	Glu	Asn	Leu 330	Gly	Asp	Ser	Ile	Val 335	Gly
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Tyr	Val	Phe 355	Phe	Glu	Glu	Gln	Glu 360	Asp	Glu	Ile	Ile	Gly 365	Phe	Gly	Gln
Glu 370	Leu	Lys	Asn	Pro	Gln	Glu 375	Glu	Thr	Leu	Gln	Ala 380	Phe	Asp	Ser	His
Tyr 385	Asp	Tyr	Thr	Ile	Cys 390	Gly	Asp	Ser	Glu	Asp 395	Met	Val	Cys	Thr	Pro 400
Lys	Ser	Asp	Glu	Phe 405	Asn	Pro	Cys	Glu	Asp 410	Ile	Met	Gly	Tyr	Lys 415	Phe
Leu	Arg	Ile	Val 420	Val	Trp	Phe	Val	Ser 425	Leu	Leu	Ala	Leu	Leu 430	Gly	Asn
Val	Phe 435	Val	Leu	Leu	Ile	Leu	Leu 440	Thr	Ser	His	Tyr	Lys 445	Leu	Asn	Val
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450					455					460					
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Ala	Gly	Phe	Phe 500	Thr	Val	Phe	Ala	Ser 505	Glu	Leu	Ser	Val	Tyr 510	Thr	Leu
Thr	Val	Ile 515	Thr	Leu	Glu	Arg	Trp 520	Tyr	Ala	Ile	Thr	Phe 525	Ala	Met	Ala
Leu	Asp 530	Arg	Lys	Ile	Arg	Leu 535	Arg	His	Ala	Cys	Ala 540	Ile	Met	Val	Gly
Gly 545	Trp	Val	Cys	Cys	Phe 550	Leu	Leu	Ala	Leu	Leu 555	Pro	Leu	Val	Gly	Ile 560
Ser	Ser	Tyr	Ala	Lys 565	Val	Ser	Ile	Cys	Leu 570	Pro	Met	Asp	Thr	Glu 575	Thr
Pro	Leu	Ala	Leu 580	Ala	Tyr	Ile	Val	Phe 585	Val	Leu	Thr	Leu	Asn 590	Ile	Val
Ala	Phe 595	Val	Ile	Val	Cys	Cys	Cys 600	Tyr	Val	Lys	Ile	Tyr 605	Ile	Thr	Val
Arg	Asn 610	Pro	His	Asn	Pro	Gly 615	Asp	Lys	Asp	Thr	Lys 620	Ile	Ala	Lys	Arg
Met 625	Ala	Val	Leu	Ile	Phe 630	Thr	Asp	Phe	Thr	Cys 635	Met	Ala	Pro	Ile	Ser 640
Phe	Tyr	Ala	Val	Ser 645	Ala	Ile	Leu	Asn	Lys 650	Pro	Leu	Ile	Thr	Val 655	Ser
Asn	Ser	Lys	Ile 660	Leu	Leu	Val	Leu	Phe 665	Tyr	Pro	Ile	Asn	Ser 670	Cys	Ala
Asn	Pro	Phe 675	Leu	Tyr	Ala	Ile	Phe 680	Thr	Lys	Ala	Phe	Gln 685	Arg	Asp	Val
Phe	Ile 690	Leu	Leu	Ser	Lys	Phe 695	Gly	Ile	Cys	Lys	Arg 700	Gln	Ala	Gln	Ala
Tyr 705	Arg	Gly	Gln	Arg	Val 710	Pro	Pro	Lys	Asn	Ser 715	Thr	Asp	Ile	Gln	Val 720
Gln	Lys	Val	Thr	His 725	Asp	Met	Arg	Gln	Gly 730	Leu	His	Asn	Met	Glu 735	Asp
Val	Tyr	Glu	Leu 740	Ile	Glu	Asn	Ser	His 745	Leu	Thr	Pro	Lys	Lys 750	Gln	Gly
Gln	Ile	Ser	Glu	Glu	Tyr	Met	Gln	Thr	Val	Leu	Ala	Ile	Ser	Ala	Gln

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Phe	His	His	Thr	Gly	Leu	Val	Asp	Pro	Ser	Ser	Val	Pro	Ser	Leu	Gly
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Cys	Arg	Ser	Met	Gly	Cys	Leu	Gly	Asn	Ser	Lys	Thr	Glu	Asp	Gln	Arg
785					790					795					800
Asn	Glu	Glu	Lys	Ala	Gln	Arg	Glu	Ala	Asn	Lys	Lys	Ile	Glu	Lys	Gln
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Leu	Gly	Ala	Gly	Glu	Ser	Gly	Lys	Ser	Thr	Ile	Val	Lys	Gln	Met	Arg
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Asp	Ile	Lys	Asn	Asn	Leu	Lys	Glu	Ala	Ile	Glu	Thr	Ile	Val	Ala	Ala
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Phe	Arg	Val	Asp	Tyr	Ile	Leu	Ser	Val	Met	Asn	Val	Pro	Asn	Phe	Asp
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Phe	Pro	Pro	Glu	Phe	Tyr	Glu	His	Ala	Lys	Ala	Leu	Trp	Glu	Asp	Glu
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Gly	Val	Arg	Ala	Cys	Tyr	Glu	Arg	Ser	Asn	Glu	Tyr	Gln	Leu	Ile	Asp
945						950					955				960
Cys	Ala	Gln	Tyr	Phe	Leu	Asp	Lys	Ile	Asp	Val	Ile	Lys	Gln	Ala	Asp
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Tyr	Val	Pro	Ser	Asp	Gln	Asp	Leu	Leu	Arg	Cys	Arg	Val	Leu	Thr	Ser
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Asn	Met	Val	Ile	Arg	Glu	Asp	Asn	Gln	Thr	Asn	Arg	Leu	Gln	Glu	Ala
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1060

1065

1070

Ser Val Ile Leu Phe Leu Asn Lys Gln Asp Leu Leu Ala Glu Lys Val
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Tyr Thr Thr Pro Glu Asp Ala Thr Pro Glu Pro Gly Glu Asp Pro Arg
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Val Thr Arg Ala Lys Tyr Phe Ile Arg Asp Glu Phe Leu Arg Ile Ser
 1125 1130 1135

Thr Ala Ser Gly Asp Gly Arg His Tyr Cys Tyr Pro His Phe Thr Cys
 1140 1145 1150

Ala Val Asp Thr Glu Asn Ile Arg Arg Val Phe Asn Asp Cys Arg Asp
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Ile Ile Gln Arg Met His Leu Arg Gln Tyr Glu Leu Leu
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 35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
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Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
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Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
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Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
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Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
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Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
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Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
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Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Trp	Ala	Pro	Tyr
			260					265					270		
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr
		275					280					285			
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser
	290					295					300				
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys
305					310					315					320
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala
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Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly
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Lys	Ser	Thr	Ile	Val	Lys	Gln	Met	Lys	Ile	Ile	His	Glu	Ala	Gly	Tyr
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Arg	Ser	Arg	Glu	Tyr	Gln	Leu	Asn	Asp	Ser	Ala	Ala	Tyr	Tyr	Leu	Asn
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515

520

525

Val Leu Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe
530 535 540

Thr Phe Lys Asp Leu His Phe Lys Met Phe Asp Val Gly Gly Gln Arg
545 550 555 560

Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly Val Thr Ala Ile
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Ile Phe Cys Val Ala Leu Ser Asp Tyr Asp Leu Val Leu Ala Glu Asp
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Glu Glu Met Asn Arg Met His Glu Ser Met Lys Leu Phe Asp Ser Ile
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Cys Asn Asn Lys Trp Phe Thr Asp Thr Ser Ile Ile Leu Phe Leu Asn
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Lys Lys Asp Leu Phe Glu Glu Lys Ile Lys Lys Ser Pro Leu Thr Ile
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Cys Tyr Pro Glu Tyr Ala Gly Ser Asn Thr Tyr Glu Glu Ala Ala Ala
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Glu Ile Tyr Thr His Phe Thr Cys Ala Thr Asp Thr Lys Asn Val Gln
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Asp Cys Gly Leu Phe
705